




Columbia Basin Tribes

Water Quality Issues of Common Concern in the Columbia Basin



November 13 & 14, 2014

hosted by

**Columbia River Inter-Tribal
Fish Commission**

Creston Valley Wildlife Management Area, photo courtesy Laura Gephart

**Columbia Basin Tribes
Water Quality Issues of Common Concern in the Columbia Basin
November 13-14, 2014**

Hosted at: Columbia River Inter-Tribal Fish Commission
700 NE Multnomah Street, Celilo Room 5th Floor
Portland, OR (503) 238-066

Agenda

Purpose of Meeting: Updates from Environmental Protection Agency and Washington Governor's officials on Columbia Basin water quality processes and related policy issues. Discuss strategies for moving forward.

Thursday, November 13, 2014

2:00 pm Tribal Caucus
Review and update water quality issues in the Columbia River Basin
Prepare for meetings with WA Governor's Office and EPA Region 10

5:00 pm Adjourn Tribal Caucus

Friday, November 14, 2014

8:15 am Invocation

8:30 am Welcome and Introductions

Tab 1 Columbia Basin Tribes
Rob Duff, Washington Governor's Office Policy Advisor
Kelly Susewind, WA Department of Ecology Special Assistant

- Review and Discuss WA Governor's Toxics Reduction Initiative

10:00 am Welcome and Introductions
Columbia Basin Tribes
Dennis McLerran, EPA Region 10 Administrator
Dan Opalski, Director of Office and Water

10:15 am Update and Discussion on Water Quality Issues in EPA Region 10

Tab 2 Water Quality Standards Human Health Criteria & Fish Consumption in WA, ID and OR (Paul Lumley, CRITFC Executive Director and Mary Lou Soscia, EPA Columbia River Coordinator)

Tab 3 Protection of Downstream Water Quality Standards in the Columbia Watershed (Scott Hauser, Upper Snake River Tribes Foundation Environmental Program Director)

Tab 4 EPA Rulemaking to Engage Tribes in the Clean Water Act Section 303(d) Impaired Water Listing and Total Maximum Daily Load Program (Ken Merrill, Kalispel Tribe, Water Resource Program)

Tab 5 Hell's Canyon Site Specific Criteria Update (Julie Carter, CRITFC Policy Analyst)

Tab 6 Appropriations Outlook – Columbia River Restoration Act (Charles Hudson, CRITFC Intergovernmental Affairs Director)

Tab 7 Columbia River Treaty (Paul Lumley, CRITFC Executive Director)

12:00 pm Lunch
We plan to take a break, get lunch in the area and bring it back if necessary

12:30 pm Roundtable - EPA and Tribal representatives

- Identification and discussion of issues and concerns and future strategy

1:30 pm Conclude discussion with EPA (group photo)

1:30 pm Tribal Caucus – Discussion on Path Forward

2:30 pm Adjourn Meeting

Agenda Materials

Tab 1 – Washington Water Quality Rulemaking

1. Preliminary Draft Rule – Released September 30, 2014
2. Key Issues with the Washington Rulemaking
3. Governor’s Legislative Initiative Slide Presentation

Tab 2 –Fish Consumption Survey Project, Resolutions, and Tribal Comments

1. 2014 – NCAI Resolution “Supporting EPA Promulgation of Surface Water Quality Standards in States that Fail to Adopt Standards that Adequately Protect Tribal People Who Practice Subsistence Lifeways”
2. October 31, 2014 CRITFC Letter to Administrator McCarthy on Washington Water Quality Standards
3. 2014 – ATNI Resolution “Supporting EPA Promulgation of Surface Water Quality Standards for Washington State, and Opposing Governor Inslee’s Policy Decision to Weaken Cancer Protection Criteria”
4. 2013 – ATNI Resolution “Reduce Cancer Risk to Tribal Fish Consumers to At Least One in One Million”
5. 2013 – NCAI Resolution “Reduce Cancer Risk to Tribal Fish Consumers to at Least One in One Million”
6. June 5, 2014 CTUIR Letter to EPA on Environmental Justice and Cancer Risk Level
7. June 3, 2014 CRITFC Letter to EPA on Environmental Justice and Cancer Risk Level
8. 2012 – ATNI Resolution “Requesting That the US Environmental Protection Agency Accomplish a Fish Consumption Rate of No Less than 175 Grams Per Day for Human Health Criteria Rulemaking in the Pacific Northwest”
9. EPA’s October 1, 2014 Idaho Fish Consumption Project Update
10. November 4, 2014 – USRT Comment Letter to IDEA on Suppression

Tab 3 – Protection of Downstream Waters

1. EPA Protection of Downstream Waters – FAQ
2. Idaho acknowledgement of need to consider downstream protection
3. March 2012 – EPA “Considerations for the Development of Multijurisdictional TMDLs”
4. Mid-Columbia fish consumption advisory

Tab 4 – EPA Rulemaking to Engage Tribes in Impaired Listings and TMDLs

1. April 2014 Notification of Consultation on Reinterpretation of TAS Provisions
2. March 2014 Notification of Consultation to Provide Opportunities for Tribes to Engage in Impaired Water Listing and TMDL Program
3. July 2014 – EPA Presentation on Tribal Eligibility to Administer Regulatory Programs

Tab 5 – Hells Canyon

1. Background of Hells Canyon Site Specific Criteria
2. Idaho DEQ Letter to EPA June 2012
3. Idaho DEQ Notice of Proposed Rulemaking
4. Idaho DEQ Response to Comments

Tab 6 – Appropriations

1. Need for a 2014 Columbia River Restoration Act
2. H. R. 5216 Columbia River Restoration Act Language
3. August 2014 CRITFC Letter of Support for the CRRRA

Tab 7 – Columbia River Treaty

1. Common Cause: Building Flexibility into the Columbia River Treaty
2. Integrating Ecosystem Based Function into the Columbia River Treaty
3. Flood Risk Management and the Columbia River Treaty
4. Restoring Fish Passage and the Columbia River Treaty

Washington Department of Ecology, Water Quality Program

Toxics Language and Table

Preliminary Draft—WAC 173-201A-240

September 30, 2014

*[Note: Preliminary draft revisions to section WAC 173-201A-240 are shown below using underline and strikeout. Sub-sections 3 & 4 below are not new; they have been moved up in the section to come before the table of toxics criteria. The current Table 240(3), Toxic Substances Criteria for aquatic life, will be deleted in its entirety and replaced with a new Table 240 to include both aquatic life and human health criteria. **Aquatic life criteria and related footnotes remain the same as what is in current rule.** New human health criteria are found in the new Table 240, with associated new footnotes below the table.]*

WAC 173-201A-240 Toxic substances. (1) Toxic substances shall not be introduced above natural background levels in waters of the state which have the potential either singularly or cumulatively to adversely affect characteristic water uses, cause acute or chronic toxicity to the most sensitive biota dependent upon those waters, or adversely affect public health, as determined by the department.

(2) The department shall employ or require chemical testing, acute and chronic toxicity testing, and biological assessments, as appropriate, to evaluate compliance with subsection (1) of this section and to ensure that aquatic communities and the existing and designated uses of waters are being fully protected.

(3) USEPA Quality Criteria for Water, 1986, as revised, shall be used in the use and interpretation of the values listed in Table 240 of this section.

(4) Concentrations of toxic, and other substances with toxic propensities not listed in Table 240 of this section shall be determined in consideration of USEPA Quality Criteria for Water, 1986, and as revised, and other relevant information as appropriate.

(53) The following criteria, found in Table 240(3), shall be applied to all surface waters of the state of Washington ~~for the protection of aquatic life.~~ Values are µg/L for all substances except Ammonia and Chloride which are mg/L.

(a) Aquatic Life Protection. The department may revise the following criteria for aquatic life on a statewide or water body-specific basis as needed to protect aquatic life occurring in waters of the state and to increase the technical accuracy of the criteria being applied. The department shall formally adopt any appropriate revised criteria as part of this chapter in accordance with the provisions established in chapter 34.05 RCW, the Administrative Procedure Act. The department shall ensure there are early opportunities for public review and comment on proposals to develop revised criteria. ~~Values are µg/L for all substances except Ammonia and Chloride which are mg/L.~~

(b) Human Health Protection. The following provisions apply to the human health criteria in Table 240. All waters shall maintain a level of water quality when entering downstream waters that provides for the attainment and maintenance of the water quality standards of those downstream waters, including the waters of another state. The human health criteria in the tables were calculated using a fish consumption rate of 175 g/day. The human health criteria calculations and variables include chronic durations of exposure up to 70 years. All human health criteria for metals are for total metal concentrations, unless otherwise noted. Dischargers have the obligation to reduce toxics in discharges through the use of AKART.

The language in this preliminary draft is formatted to be easy to read.
The formal draft CR 102 draft will look different by virtue of formatting.

[The Table 240(3) for aquatic life criteria currently in rule will be deleted and replaced with a new Table 240 to include both the currently approved aquatic life, which will not change, and new preliminary draft human health criteria. See Table 240 below for preliminary draft numbers and information. **Please note that the aquatic life criteria and associated footnotes found in this new Table 240, do not change and are the same as those found in the current standards at Table 240(3), at:**
<http://app.leg.wa.gov/WAC/default.aspx?cite=173-201A-240.>]

Table 240
Toxic Substances Criteria

Compound/chemical	Chemical Abstracts Service #	Category	Aquatic life criteria - Freshwater		Aquatic life criteria - Marine water		Human Health Criteria for consumption of:	
			Acute	Chronic	Acute	Chronic	Water & Organisms	Organisms only
Antimony	7440360	Metals, cyanide, and total phenols	-	-	-	-	14 (A)	180
Arsenic	7440382	Metals, cyanide, and total phenols	360.0 (c,dd)	190.0 (d,dd)	69.0 (c,ll,dd)	36.0 (d,cc,ll,dd)	10 (B)	10 (B)
Asbestos	1332214	Toxic pollutants and hazardous substances	-	-	-	-	7,000,000 fibers/L (D)	-
Beryllium	7440417	Metals, cyanide, and total phenols	-	-	-	-	-	-
Cadmium	7440439	Metals, cyanide, and total phenols	(l, c,dd)	(l, c,dd)	42.0 c,dd	9.3 (d,dd)	-	-
Chromium (III)	16065831	Metals, cyanide, and total phenols	(m, c,gg)	(n, d,gg)	-	-	-	-
Chromium (VI)	18540299	Metals, cyanide, and total phenols	15.0 (c, l, ii,dd)	10.0 (d, ii,dd)	1,100.0 (c,l,ll,dd)	50.0 (d,ll,dd)	-	-
Copper	7440508	Metals, cyanide, and total phenols	(o, c,dd)	(p, d,dd)	4.8 (c,ll,dd)	3.1 (d,ll,dd)	1,300* (D)	-
Lead	7439921	Metals, cyanide, and total phenols	(q, c,dd)	(r, d,dd)	210.0 (c,ll,dd)	8.1 (d,ll,dd)	-	-
Mercury	7439976	Metals, cyanide, and total phenols	2.1 (c, kk, dd)	0.012 (d, ff,s)	1.8 (c,ll,dd)	0.025 (d,ff,s)	(H)	(H)
Methylmercury	22967926	Nonconventional	-	-	-	-	-	-
Nickel	7440020	Metals, cyanide, and total phenols	(t, c,dd)	(u, d,dd)	74.0 (c,ll,dd)	8.2 (d,ll,dd)	160	190
Selenium	7782492	Metals, cyanide, and total phenols	20.0 (c, ff)	5.0 (d, ff)	290 (c,ll,dd)	71.0 (d, x,ll,dd)	140	480
Silver	7440224	Metals, cyanide, and total phenols	(v, a,dd)	-	1.9 (a,ll,dd)	-	-	-
Thallium	7440280	Metals, cyanide, and total phenols	-	-	-	-	0.24	0.27
Zinc	7440666	Metals, cyanide, and total phenols	(aa, c,dd)	(bb, d,dd)	90.0 (c,ll,dd)	81.0 (d,ll,dd)	2,300	2,900
1,1,1-Trichloroethane	71556	Volatile	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	79345	Volatile	-	-	-	-	0.17 (A, C)	4.6 (C)
1,1,2-Trichloroethane	79005	Volatile	-	-	-	-	0.60 (A, C)	18 (C)

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Compound/chemical	Chemical Abstracts Service #	Category	Aquatic life criteria - Freshwater		Aquatic life criteria - Marine water		Human Health Criteria for consumption of:	
			Acute	Chronic	Acute	Chronic	Water & Organisms	Organisms only
<u>1,1-Dichloroethane</u>	<u>75343</u>	<u>Volatile</u>	-	-	-	-	-	-
<u>1,1-Dichloroethylene</u>	<u>75354</u>	<u>Volatile</u>	-	-	-	-	<u>0.057 (A)</u>	<u>3.2 (A)</u>
<u>1,2,4-Trichlorobenzene</u>	<u>120821</u>	<u>Base/neutral compounds</u>	-	-	-	-	<u>36</u>	<u>40</u>
<u>1,2-Dichlorobenzene</u>	<u>95501</u>	<u>Volatile</u>	-	-	-	-	<u>610</u>	<u>740</u>
<u>1,2-Dichloroethane</u>	<u>107062</u>	<u>Volatile</u>	-	-	-	-	<u>0.38 (A, C)</u>	<u>42 (C)</u>
<u>1,2-Dichloropropane</u>	<u>78875</u>	<u>Volatile</u>	-	-	-	-	<u>4.4 (C)</u>	<u>17 (C)</u>
<u>1,3-Dichloropropene</u>	<u>542756</u>	<u>Volatile</u>	-	-	-	-	<u>10 (A)</u>	<u>72</u>
<u>1,2-Diphenylhydrazine</u>	<u>122667</u>	<u>Base/neutral compounds</u>	-	-	-	-	<u>0.040 (A, C)</u>	<u>0.23 (C)</u>
<u>1,2-Trans-Dichloroethylene</u>	<u>156605</u>	<u>Volatile</u>	-	-	-	-	<u>700</u>	<u>5,800</u>
<u>1,3-Dichlorobenzene</u>	<u>541731</u>	<u>Volatile</u>	-	-	-	-	<u>91</u>	<u>110</u>
<u>1,4-Dichlorobenzene</u>	<u>106467</u>	<u>Volatile</u>	-	-	-	-	<u>91</u>	<u>110</u>
<u>2,3,7,8-TCDD (Dioxin)</u>	<u>1746016</u>	<u>Dioxin</u>	-	-	-	-	<u>0.000000013 (A)</u>	<u>0.000000014 (A)</u>
<u>2,4,6-Trichlorophenol</u>	<u>88062</u>	<u>Acid compounds</u>	-	-	-	-	<u>2.1 (A, C)</u>	<u>2.8 (C)</u>
<u>2,4-Dichlorophenol</u>	<u>120832</u>	<u>Acid compounds</u>	-	-	-	-	<u>26</u>	<u>34</u>
<u>2,4-Dimethylphenol</u>	<u>105679</u>	<u>Acid compounds</u>	-	-	-	-	<u>87</u>	<u>97</u>
<u>2,4-Dinitrophenol</u>	<u>51285</u>	<u>Acid compounds</u>	-	-	-	-	<u>70 (A)</u>	<u>610</u>
<u>2,4-Dinitrotoluene</u>	<u>121142</u>	<u>Base/neutral compounds</u>	-	-	-	-	<u>0.11 (A, C)</u>	<u>3.9 (C)</u>
<u>2,6-Dinitrotoluene</u>	<u>606202</u>	<u>Base/neutral compounds</u>	-	-	-	-	-	-
<u>2-Chloroethyvinyl Ether</u>	<u>110758</u>	<u>Volatile</u>	-	-	-	-	-	-
<u>2-Chloronaphthalene</u>	<u>91587</u>	<u>Base/neutral compounds</u>	-	-	-	-	<u>170</u>	<u>180</u>
<u>2-Chlorophenol</u>	<u>95578</u>	<u>Acid compounds</u>	-	-	-	-	<u>16</u>	<u>17</u>
<u>2-Methyl-4,6-Dinitrophenol (4,6-dinitro-o-cresol)</u>	<u>534521</u>	<u>Acid compounds</u>	-	-	-	-	<u>11</u>	<u>32</u>
<u>2-Nitrophenol</u>	<u>88755</u>	<u>Acid compounds</u>	-	-	-	-	-	-
<u>3,3'-Dichlorobenzidine</u>	<u>91941</u>	<u>Base/neutral compounds</u>	-	-	-	-	<u>0.031 (C)</u>	<u>0.033 (C)</u>
<u>3-Methyl-4-Chlorophenol (parachlorometa cresol)</u>	<u>59507</u>	<u>Acid compounds</u>	-	-	-	-	-	-
<u>4,4'-DDD</u>	<u>72548</u>	<u>Pesticides/PCBs</u>	-	-	-	-	<u>0.00036 (C)</u>	<u>0.00036 (C)</u>
<u>4,4'-DDE</u>	<u>72559</u>	<u>Pesticides/PCBs</u>	-	-	-	-	<u>0.00025 (C)</u>	<u>0.00025 (C)</u>
<u>4,4'-DDT</u>	<u>50293</u>	<u>Pesticides/PCBs</u>	-	-	-	-	<u>0.00025 (C)</u>	<u>0.00025 (C)</u>
<u>4,4'-DDT (and metabolites)</u>	-	<u>Pesticides/PCBs</u>	<u>1.1 (a)</u>	<u>0.001 (b)</u>	<u>0.13 (a)</u>	<u>0.001 (b)</u>	-	-
<u>4-Bromophenyl Phenyl Ether</u>	<u>101553</u>	<u>Base/neutral compounds</u>	-	-	-	-	-	-
<u>4-Chorophenyl Phenyl ether</u>	<u>7005723</u>	<u>Base/neutral compounds</u>	-	-	-	-	-	-
<u>4-Nitrophenol</u>	<u>100027</u>	<u>Acid compounds</u>	-	-	-	-	-	-
<u>Acenaphthene</u>	<u>83329</u>	<u>Base/neutral compounds</u>	-	-	-	-	<u>110</u>	<u>110</u>
<u>Acenaphthylene</u>	<u>208968</u>	<u>Base/neutral compounds</u>	-	-	-	-	-	-
<u>Acrolein</u>	<u>107028</u>	<u>Volatile</u>	-	-	-	-	<u>1.0</u>	<u>1.1</u>

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<u>Compound/chemical</u>	<u>Chemical Abstracts Service #</u>	<u>Category</u>	<u>Aquatic life criteria - Freshwater</u>		<u>Aquatic life criteria - Marine water</u>		<u>Human Health Criteria for consumption of:</u>	
			<u>Acute</u>	<u>Chronic</u>	<u>Acute</u>	<u>Chronic</u>	<u>Water & Organisms</u>	<u>Organisms only</u>
<u>Acrylonitrile</u>	<u>107131</u>	<u>Volatile</u>	-	-	-	-	<u>0.059 (A, C)</u>	<u>0.28 (C)</u>
<u>Aldrin</u>	<u>309002</u>	<u>Pesticides/PCBs</u>	<u>2.5 (a,e)</u>	<u>0.0019(b, e)</u>	<u>0.71 (a,e)</u>	<u>0.0019 (b,e)</u>	<u>0.000057 (C)</u>	<u>0.000058 (C)</u>
<u>alpha-BHC</u>	<u>319846</u>	<u>Pesticides/PCBs</u>	-	-	-	-	<u>0.0039 (A, C)</u>	<u>0.0056 (C)</u>
<u>alpha-Endosulfan</u>	<u>959988</u>	<u>Pesticides/PCBs</u>	-	-	-	-	<u>0.93 (A)</u>	<u>2.0 (A)</u>
<u>Anthracene</u>	<u>120127</u>	<u>Base/neutral compounds</u>	-	-	-	-	<u>3,300</u>	<u>4,600</u>
<u>Benzene</u>	<u>71432</u>	<u>Volatile</u>	-	-	-	-	<u>1.2 (A, C)</u>	<u>59 (C)</u>
<u>Benzidine</u>	<u>92875</u>	<u>Base/neutral compounds</u>	-	-	-	-	<u>0.00012 (A, C)</u>	<u>0.00023 (C)</u>
<u>Benzo(a) Anthracene</u>	<u>56553</u>	<u>Base/neutral compounds</u>	-	-	-	-	<u>0.0028 (A, C)</u>	<u>0.021 (C)</u>
<u>Benzo(a) Pyrene</u>	<u>50328</u>	<u>Base/neutral compounds</u>	-	-	-	-	<u>0.0028 (A, C)</u>	<u>0.021 (C)</u>
<u>Benzo(b) Fluoranthene</u>	<u>205992</u>	<u>Base/neutral compounds</u>	-	-	-	-	<u>0.0028 (A, C)</u>	<u>0.021 (C)</u>
<u>Benzo(ghi) Perylene</u>	<u>191242</u>	<u>Base/neutral compounds</u>	-	-	-	-	-	-
<u>Benzo(k) Fluoranthene</u>	<u>207089</u>	<u>Base/neutral compounds</u>	-	-	-	-	<u>0.0028 (A, C)</u>	<u>0.021 (C)</u>
<u>beta-BHC</u>	<u>319857</u>	<u>Pesticides/PCBs</u>	-	-	-	-	<u>0.014 (A, C)</u>	<u>0.020 (C)</u>
<u>beta-Endosulfan</u>	<u>33213659</u>	<u>Pesticides/PCBs</u>	-	-	-	-	<u>0.93 (A)</u>	<u>2.0 (A)</u>
<u>Bis(2-Chloroethoxy)Methane</u>	<u>111911</u>	<u>Base/neutral compounds</u>	-	-	-	-	-	-
<u>Bis(2-Chloroethyl) Ether</u>	<u>111444</u>	<u>Base/neutral compounds</u>	-	-	-	-	<u>0.031 (A, C)</u>	<u>0.60 (C)</u>
<u>Bis(2-Chloroisopropyl) Ether</u>	<u>108601</u>	<u>Base/neutral compounds</u>	-	-	-	-	<u>1,300</u>	<u>7,400</u>
<u>Bis(2-Ethylhexyl) Phthalate</u>	<u>117817</u>	<u>Base/neutral compounds</u>	-	-	-	-	<u>1.8 (A, C)</u>	<u>2.5 (C)</u>
<u>Bromoform</u>	<u>75252</u>	<u>Volatile</u>	-	-	-	-	<u>4.3 (A, C)</u>	<u>150 (C)</u>
<u>Butylbenzyl Phthalate</u>	<u>85687</u>	<u>Base/neutral compounds</u>	-	-	-	-	<u>210</u>	<u>220</u>
<u>Carbon Tetrachloride</u>	<u>56235</u>	<u>Volatile</u>	-	-	-	-	<u>0.25 (A, C)</u>	<u>1.9 (C)</u>
<u>Chlordane</u>	<u>57749</u>	<u>Pesticides/PCBs</u>	<u>2.4 (a)</u>	<u>0.0043 (b)</u>	<u>0.09 (a)</u>	<u>0.004 (b)</u>	<u>0.00057 (A, C)</u>	<u>0.00059 (A, C)</u>
<u>Chlorobenzene</u>	<u>108907</u>	<u>Volatile</u>	-	-	-	-	<u>420</u>	<u>890</u>
<u>Chlorodibromomethane</u>	<u>124481</u>	<u>Volatile</u>	-	-	-	-	<u>0.41 (A, C)</u>	<u>15 (C)</u>
<u>Chloroethane</u>	<u>75003</u>	<u>Volatile</u>	-	-	-	-	-	-
<u>Chloroform</u>	<u>67663</u>	<u>Volatile</u>	-	-	-	-	<u>5.7 (A)</u>	<u>470 (A)</u>
<u>Chrysene</u>	<u>218019</u>	<u>Base/neutral compounds</u>	-	-	-	-	<u>0.0028 (A, C)</u>	<u>0.021 (C)</u>
<u>Cyanide</u>	<u>57125</u>	<u>Metals, cyanide, and total phenols</u>	<u>22.0 (c,ee)</u>	<u>5.2 (d,ee)</u>	<u>1.0 (c,mm,ee)</u>	<u>(d,mm,ee)</u>	<u>700 (A, E)</u>	<u>9,100 (E)</u>
<u>delta-BHC</u>	<u>319868</u>	<u>Pesticides/PCBs</u>	-	-	-	-	-	-
<u>Dibenzo(a,h) Anthracene</u>	<u>53703</u>	<u>Base/neutral compounds</u>	-	-	-	-	<u>0.0028 (A, C)</u>	<u>0.021 (C)</u>
<u>Dichlorobromomethane</u>	<u>75274</u>	<u>Volatile</u>	-	-	-	-	<u>0.27 (A, C)</u>	<u>20 (C)</u>
<u>Dieldrin</u>	<u>60571</u>	<u>Pesticides/PCBs</u>	<u>2.5 (a,e)</u>	<u>0.0019 (b,e)</u>	<u>0.71 (a,e)</u>	<u>0.0019 (b,e)</u>	<u>0.000061 (C)</u>	<u>0.000061 (C)</u>
<u>Diethyl Phthalate</u>	<u>84662</u>	<u>Base/neutral compounds</u>	-	-	-	-	<u>4,300</u>	<u>5,000</u>
<u>Dimethyl Phthalate</u>	<u>131113</u>	<u>Base/neutral compounds</u>	-	-	-	-	<u>96,000</u>	<u>130,000</u>

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<u>Compound/chemical</u>	<u>Chemical Abstracts Service #</u>	<u>Category</u>	<u>Aquatic life criteria - Freshwater</u>		<u>Aquatic life criteria - Marine water</u>		<u>Human Health Criteria for consumption of:</u>	
			<u>Acute</u>	<u>Chronic</u>	<u>Acute</u>	<u>Chronic</u>	<u>Water & Organisms</u>	<u>Organisms only</u>
<u>Di-n-Butyl Phthalate</u>	<u>84742</u>	<u>Base/neutral compounds</u>	-	-	-	-	<u>460</u>	<u>510</u>
<u>Di-n-Octyl Phthalate</u>	<u>117840</u>	<u>Base/neutral compounds</u>	-	-	-	-	-	-
<u>Endosulfan</u>	-	<u>Pesticides/PCBs</u>	<u>0.22 (a)</u>	<u>0.056 (b)</u>	<u>0.034 (a)</u>	<u>0.0087 (b)</u>	-	-
<u>Endosulfan Sulfate</u>	<u>1031078</u>	<u>Pesticides/PCBs</u>	-	-	-	-	<u>0.93 (A)</u>	<u>2.0 (A)</u>
<u>Endrin</u>	<u>72208</u>	<u>Pesticides/PCBs</u>	<u>0.18 (a)</u>	<u>0.0023 (b)</u>	<u>0.037 (a)</u>	<u>0.0023 (b)</u>	<u>0.034</u>	<u>0.035</u>
<u>Endrin Aldehyde</u>	<u>7421934</u>	<u>Pesticides/PCBs</u>	-	-	-	-	<u>0.034</u>	<u>0.035</u>
<u>Ethylbenzene</u>	<u>100414</u>	<u>Volatile</u>	-	-	-	-	<u>930</u>	<u>1,200</u>
<u>Fluoranthene</u>	<u>206440</u>	<u>Base/neutral compounds</u>	-	-	-	-	<u>16</u>	<u>16</u>
<u>Fluorene</u>	<u>86737</u>	<u>Base/neutral compounds</u>	-	-	-	-	<u>440</u>	<u>610</u>
<u>Hexachlorocyclohexane (gamma-BHC; Lindane)</u>	<u>58899</u>	<u>Pesticides/PCBs</u>	<u>2.0 (a)</u>	<u>0.08 (b)</u>	<u>0.16 (a)</u>	-	<u>0.019 (A)</u>	<u>0.063 (A)</u>
<u>Heptachlor</u>	<u>76448</u>	<u>Pesticides/PCBs</u>	<u>0.52 (a)</u>	<u>0.0038 (b)</u>	<u>0.053 (a)</u>	<u>0.0036 (b)</u>	<u>0.000091 (C)</u>	<u>0.000091 (C)</u>
<u>Heptachlor Epoxide</u>	<u>1024573</u>	<u>Pesticides/PCBs</u>	-	-	-	-	<u>0.000045 (C)</u>	<u>0.000045 (C)</u>
<u>Hexachlorobenzene</u>	<u>118741</u>	<u>Base/neutral compounds</u>	-	-	-	-	<u>0.00033 (C)</u>	<u>0.00033 (C)</u>
<u>Hexachlorobutadiene</u>	<u>87683</u>	<u>Base/neutral compounds</u>	-	-	-	-	<u>0.44 (A, C)</u>	<u>21 (C)</u>
<u>Hexachlorocyclopentadiene</u>	<u>77474</u>	<u>Base/neutral compounds</u>	-	-	-	-	<u>170</u>	<u>630</u>
<u>Hexachloroethane</u>	<u>67721</u>	<u>Base/neutral compounds</u>	-	-	-	-	<u>1.9 (A, C)</u>	<u>3.8 (C)</u>
<u>Indeno(1,2,3-cd) Pyrene</u>	<u>193395</u>	<u>Base/neutral compounds</u>	-	-	-	-	<u>0.0028 (A, C)</u>	<u>0.021 (C)</u>
<u>Isophorone</u>	<u>78591</u>	<u>Base/neutral compounds</u>	-	-	-	-	<u>8.4 (A, C)</u>	<u>600 (A, C)</u>
<u>Methyl Bromide</u>	<u>74839</u>	<u>Volatile</u>	-	-	-	-	<u>42</u>	<u>170</u>
<u>Methyl Chloride</u>	<u>74873</u>	<u>Volatile</u>	-	-	-	-	-	-
<u>Methylene Chloride</u>	<u>75092</u>	<u>Volatile</u>	-	-	-	-	<u>4.7 (A, C)</u>	<u>680 (C)</u>
<u>Napthalene</u>	<u>91203</u>	<u>Base/neutral compounds</u>	-	-	-	-	-	-
<u>Nitrobenzene</u>	<u>98953</u>	<u>Base/neutral compounds</u>	-	-	-	-	<u>16</u>	<u>79</u>
<u>N-Nitrosodimethylamine</u>	<u>62759</u>	<u>Base/neutral compounds</u>	-	-	-	-	<u>0.00069 (A, C)</u>	<u>3.4 (C)</u>
<u>N-Nitrosodi-n-Propylamine</u>	<u>621647</u>	<u>Base/neutral compounds</u>	-	-	-	-	<u>0.052 (C)</u>	<u>0.58 (C)</u>
<u>N-Nitrosodiphenylamine</u>	<u>86306</u>	<u>Base/neutral compounds</u>	-	-	-	-	<u>5.0 (A, C)</u>	<u>6.9 (C)</u>
<u>Pentachlorophenol (PCP)</u>	<u>87865</u>	<u>Acid compounds</u>	<u>(w, c)</u>	<u>(v, d)</u>	<u>13.0 c</u>	<u>7.9 (d)</u>	<u>0.28 (A, C)</u>	<u>3.5 (C)</u>
<u>Phenanthrene</u>	<u>85018</u>	<u>Base/neutral compounds</u>	-	-	-	-	-	-
<u>Phenol</u>	<u>108952</u>	<u>Acid compounds</u>	-	-	-	-	<u>11,000</u>	<u>98,000</u>
<u>Polychlorinated Biphenyls (PCBs)</u>	-	<u>Pesticides/PCBs</u>	<u>2.0 (b)</u>	<u>0.014 (b)</u>	<u>10.0 (b)</u>	<u>0.030 (b)</u>	<u>0.00017 (A, F)</u>	<u>0.00017 (A, F)</u>
<u>Pyrene</u>	<u>129000</u>	<u>Base/neutral compounds</u>	-	-	-	-	<u>330</u>	<u>460</u>
<u>Tetrachloroethylene</u>	<u>127184</u>	<u>Volatile</u>	-	-	-	-	<u>0.8 (A, C)</u>	<u>3.8 (C)</u>
<u>Toluene</u>	<u>108883</u>	<u>Volatile</u>	-	-	-	-	<u>4,100</u>	<u>8,500</u>
<u>Toxaphene</u>	<u>8001352</u>	<u>Pesticides/PCBs</u>	<u>0.73 (c, z)</u>	<u>0.0002 (d)</u>	<u>0.21 (c,z)</u>	<u>0.0002(d)</u>	<u>0.00032 (C)</u>	<u>0.00032 (C)</u>
<u>Trichloroethylene</u>	<u>79016</u>	<u>Volatile</u>	-	-	-	-	<u>2.7 (A, C)</u>	<u>34 (C)</u>
<u>Vinyl Chloride</u>	<u>75014</u>	<u>Volatile</u>	-	-	-	-	<u>0.26 (C,G)</u>	<u>2.8 (C, G)</u>
<u>Ammonia (hh)</u>	-	<u>Nonconventional</u>	<u>(f, c)</u>	<u>(g, d)</u>	<u>0.233 (h,c)</u>	<u>0.035 (h,d)</u>	-	-

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			<u>Acute</u>	<u>Chronic</u>	<u>Acute</u>	<u>Chronic</u>	<u>Water & Organisms</u>	<u>Organisms only</u>
<u>Chloride (dissolved) (k)</u>	-	<u>Nonconventional</u>	<u>860.0 (h, c)</u>	<u>230.0 (h,d)</u>	-	-	-	-
<u>Chlorine (total residual)</u>	-	<u>Nonconventional</u>	<u>19.0 (c)</u>	<u>11.0 (d)</u>	<u>13.0 c</u>	<u>7.5 (d)</u>	-	-
<u>Chlorpyrifos</u>	-	<u>Toxic pollutants and hazardous substances</u>	<u>0.083 (c)</u>	<u>0.041 (d)</u>	<u>0.011 c</u>	<u>0.0056 (d)</u>	-	-
<u>Parathion</u>	-	<u>Toxic pollutants and hazardous substances</u>	<u>0.065 (c)</u>	<u>0.013 (d)</u>	-	-	-	-

~~Footnotes~~ Footnotes for aquatic life criteria in Table 240(3):

- a. An instantaneous concentration not to be exceeded at any time.
- b. A 24-hour average not to be exceeded.
- c. A 1-hour average concentration not to be exceeded more than once every three years on the average.
- d. A 4-day average concentration not to be exceeded more than once every three years on the average.
- e. Aldrin is metabolically converted to Dieldrin. Therefore, the sum of the Aldrin and Dieldrin concentrations are compared with the Dieldrin criteria.
- f. Shall not exceed the numerical value in total ammonia nitrogen (mg N/L) given by:

$$\begin{array}{l}
 \text{For salmonids} \\
 \text{present:} \quad \frac{0.275}{1 + 10^{7.204 - \text{pH}}} + \frac{39.0}{1 + 10^{\text{pH} - 7.204}} \\
 \\
 \text{For salmonids} \\
 \text{absent:} \quad \frac{0.411}{1 + 10^{7.204 - \text{pH}}} + \frac{58.4}{1 + 10^{\text{pH} - 7.204}}
 \end{array}$$

- g. Shall not exceed the numerical concentration calculated as follows:
Unionized ammonia concentration for waters where salmonid habitat is an existing or designated use:

$$\begin{array}{l}
 0.80 \div (\text{FT})(\text{FPH})(\text{RATIO}) \\
 \text{where } \text{RATIO} = 13.5; 7.7 \leq \text{pH} \leq 9 \\
 : \\
 \text{RATIO} = (20.25 \times 10^{(7.7 - \text{pH})}) \div (1 + 10^{(7.4 - \text{pH})}); 6.5 \leq \text{pH} \leq 7.7 \\
 \text{FT} = 1.4; 15 \leq T \leq 30 \\
 \text{FT} = 10^{[0.03(20 - T)]}; 0 \leq T \leq 15 \\
 \text{FPH} = 1; 8 \leq \text{pH} \leq 9 \\
 \text{FPH} = (1 + 10^{(7.4 - \text{pH})}) \div 1.25; 6.5 \leq \text{pH} \leq 8.0
 \end{array}$$

Total ammonia concentrations for waters where salmonid habitat is not an existing or designated use and other fish early life stages are absent:

$$\text{Chronic Criterion} = \left(\frac{0.0577}{1 + 10^{7.688 - \text{pH}}} + \frac{2.487}{1 + 10^{\text{pH} - 7.688}} \right) \times (1.45 \times 10^{0.028(25 - A)})$$

where: A = the greater of either T (temperature in degrees Celsius) or 7.

Applied as a thirty-day average concentration of total ammonia nitrogen (in mg N/L) not to be exceeded more than once every three years on average. The highest four-day average within the thirty-day period should not exceed 2.5 times the chronic criterion.

Total ammonia concentration for waters where salmonid habitat is not an existing or designated use and other fish early life stages are present:

$$\text{Chronic Criterion} = \left(\frac{0.0577}{1 + 10^{7.688 - \text{pH}}} + \frac{2.487}{1 + 10^{\text{pH} - 7.688}} \right) \times B$$

where: B = the lower of either 2.85, or $1.45 \times 100.028 \times (25 - T)$. T = temperature in degrees Celsius.

Applied as a thirty-day average concentration of total ammonia nitrogen (in mg N/L) not to be exceeded more than once every three years on the average. The highest four-day average within the thirty-day period should not exceed 2.5 times the chronic criterion.

- h. Measured in milligrams per liter rather than micrograms per liter.
- i. $\leq (0.944)(e^{(1.128[\ln(\text{hardness})] - 3.828)})$ at hardness = 100. Conversion factor (CF) of 0.944 is hardness dependent. CF is calculated for other hardnesses as follows: $\text{CF} = 1.136672 - [(\ln \text{ hardness})(0.041838)]$.
- j. $\leq (0.909)(e^{(0.7852[\ln(\text{hardness})] - 3.490)})$ at hardness = 100. Conversion factor (CF) of 0.909 is hardness dependent. CF is calculated for other hardnesses as follows: $\text{CF} = 1.101672 - [(\ln \text{ hardness})(0.041838)]$.
- k. Criterion based on dissolved chloride in association with sodium. This criterion probably will not be adequately protective when the chloride is associated with potassium, calcium, or magnesium, rather than sodium.
- l. Salinity dependent effects. At low salinity the 1-hour average may not be sufficiently protective.
- m. $\leq (0.316)(e^{(0.8190[\ln(\text{hardness})] + 3.688)})$
- n. $\leq (0.860)(e^{(0.8190[\ln(\text{hardness})] + 1.561)})$
- o. $\leq (0.960)(e^{(0.9422[\ln(\text{hardness})] - 1.464)})$
- p. $\leq (0.960)(e^{(0.8545[\ln(\text{hardness})] - 1.465)})$
- q. $\leq (0.791)(e^{(1.273[\ln(\text{hardness})] - 1.460)})$ at hardness = 100. Conversion factor (CF) of 0.791 is hardness dependent. CF is calculated for other hardnesses as follows: $\text{CF} = 1.46203 - [(\ln \text{ hardness})(0.145712)]$.
- r. $\leq (0.791)(e^{(1.273[\ln(\text{hardness})] - 4.705)})$ at hardness = 100. Conversion factor (CF) of 0.791 is hardness dependent. CF is calculated for other hardnesses as follows: $\text{CF} = 1.46203 - [(\ln \text{ hardness})(0.145712)]$.
- s. If the four-day average chronic concentration is exceeded more than once in a three-year period, the edible portion of the consumed species should be analyzed. Said edible tissue concentrations shall not be allowed to exceed 1.0 mg/kg of methylmercury.
- t. $\leq (0.998)(e^{(0.8460[\ln(\text{hardness})] + 3.3612)})$
- u. $\leq (0.997)(e^{(0.8460[\ln(\text{hardness})] + 1.1645)})$
- v. $\leq e^{[1.005(\text{pH}) - 5.290]}$
- w. $\leq e^{[1.005(\text{pH}) - 4.830]}$
- x. The status of the fish community should be monitored whenever the concentration of selenium exceeds 5.0 ug/ l in salt water.

- y. $\leq (0.85)(e^{(1.72[\ln(\text{hardness})] - 6.52)})$
- z. Channel Catfish may be more acutely sensitive.
- aa. $\leq (0.978)(e^{(0.8473[\ln(\text{hardness})] + 0.8604)})$
- bb. $\leq (0.986)(e^{(0.8473[\ln(\text{hardness})] + 0.7614)})$
- cc. Nonlethal effects (growth, C-14 uptake, and chlorophyll production) to diatoms (*Thalassiosira aestivalis* and *Skeletonema costatum*) which are common to Washington's waters have been noted at levels below the established criteria. The importance of these effects to the diatom populations and the aquatic system is sufficiently in question to persuade the state to adopt the USEPA National Criteria value (36 µg/L) as the state threshold criteria, however, wherever practical the ambient concentrations should not be allowed to exceed a chronic marine concentration of 21 µg/L.
- dd. These ambient criteria in the table are for the dissolved fraction. The cyanide criteria are based on the weak acid dissociable method. The metals criteria may not be used to calculate total recoverable effluent limits unless the seasonal partitioning of the dissolved to total metals in the ambient water are known. When this information is absent, these metals criteria shall be applied as total recoverable values, determined by back-calculation, using the conversion factors incorporated in the criterion equations. Metals criteria may be adjusted on a site-specific basis when data are made available to the department clearly demonstrating the effective use of the water effects ratio approach established by USEPA, as generally guided by the procedures in USEPA Water Quality Standards Handbook, December 1983, as supplemented or replaced by USEPA or ecology. Information which is used to develop effluent limits based on applying metals partitioning studies or the water effects ratio approach shall be identified in the permit fact sheet developed pursuant to WAC 173-220-060 or 173-226-110, as appropriate, and shall be made available for the public comment period required pursuant to WAC 173-220-050 or 173-226-130(3), as appropriate. Ecology has developed supplemental guidance for conducting water effect ratio studies.
- ee. The criteria for cyanide is based on the weak acid dissociable method in the 19th Ed. Standard Methods for the Examination of Water and Wastewater, 4500-CN I, and as revised (see footnote dd, above).
- ff. These criteria are based on the total-recoverable fraction of the metal.
- gg. Where methods to measure trivalent chromium are unavailable, these criteria are to be represented by total-recoverable chromium.
- hh. The listed fresh water criteria are based on un-ionized or total ammonia concentrations, while those for marine water are based on un-ionized ammonia concentrations. Tables for the conversion of total ammonia to un-ionized ammonia for freshwater can be found in the USEPA's Quality Criteria for Water, 1986. Criteria concentrations based on total ammonia for marine water can be found in USEPA Ambient Water Quality Criteria for Ammonia (Saltwater)-1989, EPA440/5-88-004, April 1989.
- ii. The conversion factor used to calculate the dissolved metal concentration was 0.982.
- jj. The conversion factor used to calculate the dissolved metal concentration was 0.962.
- kk. The conversion factor used to calculate the dissolved metal concentration was 0.85.
- ll. Marine conversion factors (CF) which were used for calculating dissolved metals concentrations are given below. Conversion factors are applicable to both acute and chronic criteria for all metals except mercury. The CF for mercury was applied to the acute criterion only and is not applicable to the chronic criterion. Conversion factors are already incorporated into the criteria in the table. Dissolved criterion = criterion x CF

Metal	CF
Arsenic	1.000
Cadmium	0.994

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Metal	CF
Chromium (VI)	0.993
Copper	0.83
Lead	0.951
Mercury	0.85
Nickel	0.990
Selenium	0.998
Silver	0.85
Zinc	0.946

mm. The cyanide criteria are: 2.8µg/l chronic and 9.1µg/l acute and are applicable only to waters which are east of a line from Point Roberts to Lawrence Point, to Green Point to Deception Pass; and south from Deception Pass and of a line from Partridge Point to Point Wilson. The chronic criterion applicable to the remainder of the marine waters is 1 µg/L.

Footnotes for human health criteria in Table 240:

- A. The value for this chemical was originally calculated based on cancer or non-cancer risk, but because that calculation resulted in a higher concentration than that found in 40CFR131.36, the criterion defaulted to the concentration found in 40CFR131.36.
- B. This criterion for total arsenic is the Maximum Contaminant Level (MCL) developed under the Safe Drinking Water Act. The MCL for total arsenic is applied to surface waters where consumption of organisms-only and where consumption of water + organisms reflect the designated uses. When the Department determines that an indirect or direct industrial discharge to surface waters designated for domestic water supply may be adding arsenic to its wastewater, the Department will require the discharger to develop and implement a pollution prevention plan to reduce arsenic through the use of AKART. Indirect discharges are industries that discharge wastewater to a privately or publicly owned wastewater treatment facility.
- C. This criterion was calculated based on an additional lifetime cancer risk of one-in-one hundred thousand (1×10^{-5} risk level). For some chemicals the criterion value defaulted from the risk-based concentration to the 40CFR131.36 concentration, as indicated in footnote A above. In these cases the additional lifetime cancer risk associated with the criterion is less than one-in-one hundred thousand.
- D. This criterion is based on a regulatory level developed under the Safe Drinking Water Act.
- E. This recommended water quality criterion is expressed as total cyanide, even though the IRIS RFD used to derive the criterion is based on free cyanide. The multiple forms of cyanide that are present in ambient water have significant differences in toxicity due to their differing abilities to liberate the CN-moiety. Some complex cyanides require even more extreme conditions than refluxing with sulfuric acid to liberate the CN-moiety. Thus, these complex cyanides are expected to have little or no 'bioavailability' to humans. If a substantial fraction of the cyanide present in a water body is present in a complexed form (e.g., $\text{Fe}_4[\text{Fe}(\text{CN})_6]_3$), this criterion may be over conservative.
- F. This criterion applies to total PCBs, (e.g., the sum of all congener or all isomer or homolog or Aroclor analyses-). The PCBs criteria were calculated using a 4×10^{-5} risk level, but because that calculation resulted in a higher concentration than that found in 40CFR131.36, the criterion concentration defaulted to the concentration found in 40CFR131.36, as indicated in footnote A above.
- G. This criterion was derived using the cancer slope factor of 1.4 (LMS method, continuous lifetime exposure from birth).
- H. The human health criteria for mercury are contained in 40CFR131.36 (known as the National Toxics Rule).

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~~(4) USEPA Quality Criteria for Water, 1986, as revised, shall be used in the use and interpretation of the values listed in subsection (3) of this section.~~

~~(5) Concentrations of toxic, and other substances with toxic propensities not listed in subsection (3) of this section shall be determined in consideration of USEPA Quality Criteria for Water, 1986, and as revised, and other relevant information as appropriate. Human health-based water quality criteria used by the state are contained in 40 C.F.R. 131.36 (known as the National Toxics Rule).~~

~~(6) Risk-based criteria for carcinogenic substances shall be selected such that the upper bound excess cancer risk is less than or equal to one in one million.~~

Key Issues regarding Washington water quality rulemaking

Background:

Washington uses the National Toxics Rule criteria established in 1992, for their human health-based water quality standards (human health criteria or HHC). The state implements the water quality standards as part of the authorities delegated from the Environmental Protection Agency under the Federal Clean Water Act. The revised standards are subject to EPA review and approval. EPA also has the authority, under the CWA, to promulgate standards if state standards are not sufficiently protective of designated uses of water (drinkable, swimmable, fishable). The need to update Washington's HHC has been evident for almost two decades. Tribal dietary surveys in the mid-1990 indicated that fish consumption rates used in the calculation of HHC (set at 6.5 grams per day) were grossly under-representative of tribal consumption patterns. The triennial review of WA water quality standards in the early 2000's indicated that revisions of the human health criteria and attending fish consumption rates are necessary to meet the requirements of the Clean Water Act.

On September 30, 2014, the Washington Department of Ecology issued preliminary draft language for a proposed rule to amend the state water quality standards. The preliminary draft is not a formal draft rule. The proposal does not initiate state Administrative Procedures Act rule-making procedures, and is therefore not subject to rulemaking timelines, public hearings, or review processes at this time. The preliminary draft is based on direction from Washington Governor Jay Inslee, described on July 9, 2014, for establishing several factors that are used to calculate human health chemical criteria in the state's water quality standards.

A. Delay in the rule-making process and contingency on legislative actions

April 8, 2014: Letter from Dennis McLerran to Maia Bellon stating that Ecology needs to complete final rule by Dec 31, 2014 or EPA will move to promulgate by May 31, 2015.

The Governor's proposal is linked to legislative approval of a comprehensive package which includes new authorities for the Department of Ecology, budget increases, and shifting of funds from MTCA to the Governor's new proposed priorities. This approach attempts to use the water quality standards as leverage to promote a legislative agenda, and in doing so holds the standard setting responsibility under the CWA hostage to state

political process. Fundamentally, this strategy diminishes the importance of the water quality standards as a function of the CWA and introduces poor precedent for the revision or development of future standards.

July 9 2014: Governor Inslee's press release:

"Inslee is directing the Department of Ecology to issue a preliminary draft rule no later than Sept. 30 [2014]. He will submit legislation to the Legislature in 2015 and will make a decision on whether to adopt the final rule only after seeing the outcome of the session."

B. Fish Consumption Rate – the state has proposed to use a fish consumption rate of 175 grams per day

C. Risk Level - The existing water quality standards (WAC 173-201A-240(6)) require the use of a cancer risk rate no less protective than 10^{-6} (one per million). The Governor's proposal reduces this protective rate by ten-fold, by calculating revised standards at 10^{-5} (one per 100,000). In the "Overview of Key Decisions" issued by WADOE on September 30, 2014, the state offers reasons why they believe this change is allowable under selected EPA guidance provisions, but not why it is merited. The state indicates that the original risk rate was established in 1992 along with a fish consumption rate (FCR) of 6.5 grams per day, and implies that it is therefore appropriate to trade-off a less protective risk rate for cancer for a more protective fish consumption rate in 2014 when calculating chemical criteria. The net effect of this tradeoff is to keep the chemical criteria for dischargers largely at status quo, in the face of valid scientific evidence that the FCR has been under-estimated for over 20 years, particularly for tribal populations.

Risk Level Issues

- i. EJ issues:
 - 1. change in current standard used to lessen or weaken the effect of the FCR
 - 2. Change made because FCR increased, signifying unwillingness to apply existing risk level to higher consumers
 - 3. as a result higher consumers are disproportionately impacted

- ii. EPA review issues:
 - 1. DOE must provide justification for change in standards to receive approval, but none provided
 - 2. EPA guidance allows for RL of 10^{-4} , but EPA letter directs Ecology to keep existing standards
- iii. Technical issues
 - 1. the 10^{-5} option fails to consider risks to high consumers from persistent bioaccumulative toxics or exposure based on combinations of toxic chemicals (additive toxicity)

D. Calculation Variables

Body Weight - Issues

- i. DOE proposes change from 70 to 80 kg
- ii. EPA draft recommended 304(a) criteria uses 80kg (~176lbs)
- iii. This number is less protective of women and children - generally of lower body weight

Drinking Water - The EPA recommends that fresh water criteria use 3L for drinking water intake instead of 2L when calculating freshwater criteria. Three liters would result in more protective standards, but the state is proposing to use 2L.

- iv. For fresh water criteria only
- v. using same DWI as the NTR - 2L
- vi. EPA draft 304(a) criteria uses 3L
- vii. DOE not following draft criteria

Bioaccumulation factors versus bioconcentration factors - EPA has recommended that human health criteria calculations utilize *bioaccumulation* factors (BAF) instead of the older methodology of using *bioconcentration* factors (BCF). BAF is defined as “the ratio of the contaminant in an organism to the concentration in the ambient environment at a steady state, where the organism can take in the contaminant through ingestion with its food as well as through direct content.” (EPA 2010.) [Bioconcentration](#) is a related but more specific term, referring to uptake and accumulation of a substance from water alone. By contrast, bioaccumulation refers to uptake from all sources combined (e.g. water food, etc.). The Governor’s proposal may underestimate how much a specific

chemical will accumulate in fish tissue, because it fails to account for all exposure pathways that a fish or other seafood might uptake the chemical. This choice will result in standards that are less protective.

Relative Source Contribution (RSC) – the purpose of the RSC is to account for non-water sources of exposure to non-carcinogens when calculating human health criteria. This is important because calculations for allowable pollutants in water (the human health criteria) need to consider that people are exposed to toxics daily from the air and contact, and these exposures coupled with exposures from fish and water can cause threshold effects. EPA recommends the use of an RSC of 0.2 (meaning that only 20% of the exposure to the substance is due to drinking water and consuming fish). Ecology has elected to use a RSC of 1 meaning that they don't account for other exposures of non-carcinogenic toxics when they calculate criteria. This will result in criteria that are 5 times less stringent than when using a RSC of 0.2.

- viii. EPA recommends use of RSC for non-carcinogenic criteria for purpose of accounting for exposure to toxics in other pathways than the FCR or DWI.
- ix. Ecology needs to justify in standards submission why RSC is not necessary.
- x. EPA recommends a RSC value of .2 - suggesting that 20% of exposure can be attributed to other sources.

E. Special chemical situations

- i. Arsenic
 - 1. proposal to use of SDWA standard of 10ppb
 - 2. existing NTR is less than 1
 - 3. EPA rule originally proposed 5, and acknowledged that increase to 10 was not based on human health but of economic concerns.
 - 4. WA may be first state that increase standard. Only chemical that antibacksliding provision will not apply to in WA proposal.
- ii. Mercury
 - 1. DOE will take no action on mercury,
 - 2. is a no action proposal be justified

F. “anti-backsliding” provisions – many standards will not change

According to WADOE’s analysis, numerous water quality standards will remain the same as the 1992 rule. With the exception of the fish consumption rate (FCR) which would increase from 6.5 to 175 grams per day in the new standards, the state’s proposal keeps most input parameters used in the calculation human health criteria (see diagram) the same as the 1992 standard or sets them at less protective levels where they have discretion to do so. Of particular concern is the change to the cancer risk rate, described above. The state’s proposed changes to the inputs in the human health criteria would have made many chemical criteria more lenient. The Governor therefore included a “no backsliding” overlay provision that “caps” those criteria which would become less protective. It should be noted that the Federal Clean Water Act includes a requirement not to increase pollution over time.

- i. Numerous criteria will be adopted into state standards at no change from the NTR.
- ii. However, effectively this means that a large percentage of criteria will not be updated. For example, only 13 of 54 freshwater carcinogenic freshwater criteria will be updated.
- iii. Chemicals that are the basis for most fishing closures and health advisories will not change such as PCB, mercury, DDT and PAH

Governor's Toxics Reduction Initiative



Robert Duff
Governor's Legislative Affairs and Policy Office
State of Washington

House Environment Committee
Washington State Legislature
September 29, 2014

Overview



- Elements of Governor's proposed toxics reduction effort are outlined in July 9 clean water policy brief
- Updating the water quality rule alone does not get at majors sources of toxic chemicals
- Legislative policy proposal
 - WA Dept. of Ecology (Ecology) authority to require alternatives assessments and phase out chemicals by rule
- Toxics reduction work under existing authority
 - Support policy proposal, increase local source control efforts, partner with local governments and business

Toxic impacts to children's learning and behavior



The National Academies of Sciences suggest that 3% of brain development disorders are solely attributable to a toxic environmental exposure and another 25% result from a combination of genetic and environmental factors.

- Developing brain is very sensitive to chemicals early in life (fetal and infancy period)
- Examples: lead, methyl mercury, tobacco smoke, PCBs, organophosphate pesticides, bisphenol A, PBDE flame retardants.

Burden of disease Washington State children



	~Rate	Estimated children affected	Population of children included in survey Q.
Learning disability <i>(ever had)</i>	1 in 10	137,500	3-17 years old
ADD or ADHD	1 in 14	98,000	2-17 years old

Source: 2011-12 National Survey of Children's Health (parent survey of health and well being of children). Conducted by the National Center of Health Statistics Centers for Disease Control and Prevention (CDC) . Childhealthdata.org

Legislative Proposal Elements



Prioritizing Chemicals

- Ecology develops a list of priority chemicals.
- Build on existing lists from the Children's Safe Products Act (CSPA), water quality standards and the persistent, bioaccumulative toxics (PBT) rule
- Ability to add or remove chemicals from the list through rule-making.

Legislative Proposal Elements



Selecting Chemicals for Action Plans

- Identify four priority chemicals for Chemical Action Plan (CAP) development per biennium
- Criteria based on previous laws and rules (CSPA, PBT rule), biomonitoring, environmental monitoring and Department of Health priorities

Legislative Proposal Elements



Chemical Action Plans

- Ecology has experience developing CAPs
 - Mercury, PBDEs, lead, PAHs, PCBs
- Advisory committee engaged in each CAP
- Full suite of recommendations are considered
 - Alternatives assessment/ban, use reduction, green chemistry research, outreach and education, monitoring, product stewardship, environmentally preferred state purchasing
- Ban recommendation won't go forward without alternatives assessment
 - Existing or required by agency

Legislative Proposal Elements



Alternatives Assessment

- Alternatives assessment required if recommended in the CAP
- Alternative assessment can focus on chemical or a specific use of a chemical
- Minimum requirements of alternatives assessment would be outlined in rule

Legislative Proposal Elements



Authority to Prohibit Sale, Distribution, or Use

- Only recommended if alternatives assessment determines that a safer and feasible alternative exists
- Rule process would be required
- If no safer alternative is available, Ecology would not propose a ban
- Other CAP recommendations would be implemented

Other Elements of the Package



Advancing Safer Products

- Ecology will conduct alternatives assessments on chemicals where concern is already established
 - Polychlorinated biphenyls (PCBs) in pigments and dyes
 - Phthalate plasticizers

Other Elements of the Package



Green Chemistry

A process to design chemicals/products that work while minimizing hazard and waste

- A competitive process to fund green chemistry innovations
- Develop and integrate green chemistry curricula and materials into college-level chemistry programs
- Increase consumer awareness and availability of green branded products under EPA's Design for Environment program.

Other Elements of the Package



Water Quality Improvement in Watersheds

- Water bodies in Washington are already impaired
- Accelerate actions to bring impaired water bodies into compliance
- Develop control programs for permitted and non-permitted dischargers
- Conduct effectiveness monitoring to measure the success of implemented actions

Other Elements of the Package



Expanded Local Source Control

- Source control in new areas of the state via contracts with local governments
- Source tracing efforts in 3-5 watersheds in the Columbia River
- Point of discharge sampling for comparison with future conditions to assess effectiveness

Other Elements of the Package



Lean and Green Business Assistance

- Provide financial assistance to jump start capital improvements recommended during “lean and green” consultations
- Examples
 - Accra-Fab – Liberty Lake - saved more than \$179,000 a year while increasing production capacity
 - Decagon Devices – Pullman – eliminated lead solder
 - <http://www.ecy.wa.gov/programs/hwtr/lean/>

Other Elements of the Package



Stormwater Center Projects

- Continue research on runoff from roofing materials
- Evaluate techniques to reduce stormwater toxicity (e.g. porous asphalt, rain gardens and bioretention facilities),
- Identify hot-spot areas where salmon die before spawning
- Evaluate whether tires play a role in producing stormwater toxicity

Other Elements of the Package



Preventing Early Life Exposure to Toxics

(Washington State Department of Health)

- Identify toxic exposures of most concern in WA and prioritize prevention efforts.
- Educate women, medical providers, policy makers on best ways to prevent harmful exposures.
- Evaluate impacts of prevention (biomonitoring).
- Identify and fill data gaps for priority chemicals.





NATIONAL CONGRESS OF AMERICAN INDIANS

The National Congress of American Indians Resolution #ATL-14-31

Draft 10/28/14

TITLE: Supporting EPA Promulgation of Surface Water Quality Standards for States that Fail to Adopt Standards that Adequately Protect Tribal People Who Practice Subsistence Lifeways

EXECUTIVE COMMITTEE

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Swinomish Indian Tribal Community

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NORTHEAST
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Rosemary Morillo
Soboba Band of Mission Indians

ROCKY MOUNTAIN
Ivan Posey
Eastern Shoshone Tribe

SOUTHEAST
Ron Richardson
Haliwa-Saponi Indian Tribe

SOUTHERN PLAINS
Stephen Smith
Kiowa Tribe of Oklahoma

SOUTHWEST
Manuel Heart
Ute Mountain Ute Tribe

WESTERN
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NCAI HEADQUARTERS
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WHEREAS, we, the members of the National Congress of American Indians of the United States, invoking the divine blessing of the Creator upon our efforts and purposes, in order to preserve for ourselves and our descendants the inherent sovereign rights of our Indian nations, rights secured under Indian treaties and agreements with the United States, and all other rights and benefits to which we are entitled under the laws and Constitution of the United States, to enlighten the public toward a better understanding of the Indian people, to preserve Indian cultural values, and otherwise promote the health, safety and welfare of the Indian people, do hereby establish and submit the following resolution; and

WHEREAS, the National Congress of American Indians (NCAI) was established in 1944 and is the oldest and largest national organization of American Indian and Alaska Native tribal governments; and

WHEREAS, since time immemorial we, the first people of North America, have sought to preserve, protect and sustain our way of life, our religion and our culture, beginning with the basis of all life—the pure water that we hold sacred—and we are obligated to take appropriate and necessary actions to care for the water, today and for the next seven generations; and

WHEREAS, under the federal Clean Water Act, states must periodically revise their surface water quality standards to incorporate more current and accurate data and information, and ultimately to better protect waterways from toxic and other pollutants; and

WHEREAS, these processes to revise standards include opportunities to make certain policy choices and decisions, such as acceptable risk of additional cancers from exposure to toxic discharges; and

WHEREAS, Oregon has adopted the nation's most stringent state water quality standards utilizing human health criteria based on local tribal subsistence-based fish consumption rates (a compromise of 175 grams per day) while maintaining the widely-accepted, commonly-used cancer risk level of 1 in 1,000,000; and

WHEREAS, States such as Washington and Florida have proposed to revise their water quality standards based on *weakened* cancer risk levels to counter and effectively negate the use of local subsistence-based fish consumption rates; and

WHEREAS, EPA guidance (2000 Methodology for Deriving Ambient Water Quality Criteria) suggesting that states may use a cancer risk level of as low as 1 in 10,000 for highly exposed subgroups including subsistence fishers, while recommending that the general population be protected at a cancer risk level of 1 in 1,000,000 is inappropriate and unacceptable; and

WHEREAS, states that rely on flawed EPA guidance to justify inadequate revised standards will perpetuate an ongoing environmental *in*justice by subjecting tribal people to disproportionately higher risks simply from exercising our rights to our First Foods and practicing our religion and culture;

NOW THEREFORE BE IT RESOLVED, that NCAI requests that the U.S. Environmental Protection Agency uphold its commitments to tribes, and promulgate surface water quality standards that will protect human health, safeguard tribal and treaty rights to harvest clean, consumable fish and other aquatic resources, and promote Environmental Justice for tribal communities in states that fail or refuse to adopt such standards (as may occur in the states of Washington, Florida and possibly others); and

BE IT FURTHER RESOLVED, that NCAI opposes and rejects any state's policy choice for revising surface water quality standards that would use a risk level that is 10 or 100 times less protective against cancer than current criteria, and urges EPA to oppose and reject it as well; and

BE IT FURTHER RESOLVED, that NCAI requests that EPA reconsider, amend, or withdraw its insupportable guidance that may be referred to as an excuse by states to establish water quality standards that subject tribal people to unfair and disproportionate risks merely from practicing subsistence lifeways; and

BE IT FINALLY RESOLVED, that NCAI encourages EPA, in responding to states' proposed water quality standards revisions, to give paramount weight to its obligations to honor Treaty Rights, Reserved Rights and Trust Responsibility to non-toxic fish and other aquatic resources, and implement its Environmental Justice Policy.

CERTIFICATION

The foregoing resolution was adopted by the General Assembly at the 2014 Annual Session of the National Congress of American Indians, held at the Hyatt Regency Atlanta, October 26-31, 2014 in Atlanta, Georgia, with a quorum present.

President

ATTEST:

Recording Secretary



COLUMBIA RIVER INTER-TRIBAL FISH COMMISSION

700 NE Multnomah Street, Suite 1200
Portland, Oregon 97232

(503) 238-0667
F (503) 235-4228
www.critfc.org

October 31, 2014

Gina McCarthy, EPA Administrator
USEPA Headquarters
William Jefferson Clinton Building
1200 Pennsylvania Avenue, N.W.
Mail Code: 1101A
Washington, DC 20460

Re: Washington Water Quality Standards,
Affiliated Tribes of Northwest Indians Resolution #14-56

Dear Administrator McCarthy:

The Columbia River Inter-Tribal Fish Commission's (CRITFC) member tribes — the Confederated Tribes of the Umatilla Indian Reservation, the Confederated Tribes of the Warm Springs Reservation of Oregon, the Confederated Tribes and Bands of the Yakama Nation, and the Nez Perce Tribe — have asked that I send to you the Affiliated Tribes of Northwest Indians (ATNI) resolution that was adopted by the 57 tribal governments that comprise ATNI at their Annual Convention, held September 22-25, 2014 (see attached). The title of the resolution is:

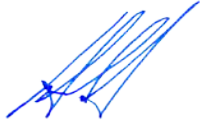
“Supporting EPA Promulgation of Surface Water Quality Standards for
Washington State, and Opposing Governor Inslee’s Policy Decision to Weaken
Cancer Protection Criteria.”

This resolution requests that EPA uphold its commitment to tribes in the region and begin promulgation of surface water quality standards in Washington State. It also requests that you reject the State’s proposed policy choice of using a cancer risk level that is 10 times less protective than the State’s current and widely accepted one-in-one-million risk level.

Our Commission concurs with the members of ATNI on this issue and strongly supports the actions requested of EPA in the resolution. In addition, CRITFC continues to endorse the position of Region 10 Administrator Dennis McLerran, who recognizes that more stringent water quality standards are necessary in the State of Washington and throughout the region to meet the requirements of the Clean Water Act. Our Commission also has serious concerns about the decision by the State to make the outcome of the water quality standards development process contingent on vague and uncertain future actions by the State legislature.

We thank you for your consideration of these comments and stand ready to assist and inform your work. If you would like to discuss how our organization can work with EPA on this very important issue, please contact me or Paul Lumley at (503) 238-0667.

Sincerely,



Carlos Smith
CRITFC Chairman

Attachment

Cc: Dennis McLerran, Administrator, EPA Region 10
Lisa Feldt, Acting Deputy Administrator
Ken Kopocis, Acting Assistant Administrator for Office of Water



2014 Annual Convention Mission, Oregon

RESOLUTION #14 - 56

“SUPPORTING EPA PROMULGATION OF SURFACE WATER QUALITY STANDARDS FOR WASHINGTON STATE, AND OPPOSING GOVERNOR INSLEE’S POLICY DECISION TO WEAKEN CANCER PROTECTION CRITERIA”

PREAMBLE

We, the members of the Affiliated Tribes of Northwest Indians (ATNI) of the United States, invoking the divine blessing of the Creator upon our efforts and purposes, in order to preserve for ourselves and our descendants rights secured under Indian Treaties, Executive Orders, and benefits to which we are entitled under the laws and Constitution of the United States and several states, to enlighten the public toward a better understanding of the Indian people, to preserve Indian cultural values, and otherwise to promote the welfare of the Indian people, do hereby establish and submit the following resolution:

WHEREAS, the ATNI are representatives of and advocates for national, regional, and specific tribal concerns; and

WHEREAS, ATNI is a regional organization comprised of American Indians/Alaska Natives and tribes in the states of Washington, Idaho, Oregon, Montana, Nevada, Northern California, and Alaska; and

WHEREAS, promotion of the health, safety, welfare, education, economic and employment opportunities of native people and preservation of their cultural and natural resources are primary goals and objectives of the ATNI; and

WHEREAS, since time immemorial we, the first people of the Pacific Northwest, have cared for and sustained our way of life, religion and culture beginning with the pure water that

we hold sacred, and we are obligated to take appropriate and necessary actions to care for the water for the next seven generations; and

WHEREAS, on July 9, 2014, Washington Governor Jay Inslee announced his policy choices for revising the State's surface water quality standards, which fail to meet the tribes' goal of protecting human health and Treaty and other tribal reserved rights for future generations and delay the adoption of State standards until after the next session of the Washington State Legislature; and

WHEREAS, the proposed standards' human health criteria would include an increase in the Fish Consumption Rate to 175 grams per day, but negates this potential improvement in water quality by simultaneously *weakening* the cancer risk level from the current level of 1 in one million to 1 in 100,000; and

WHEREAS, the weakened cancer risk level and other proposed criteria would result in water quality standards that maintain the status quo for the discharge of cancer-causing chemicals and other toxic substances that are responsible for health warnings and fishing closures throughout Washington; and

WHEREAS, the Governor's proposal will continue an ongoing environmental *in*justice by subjecting tribal people to disproportionately higher risks simply from exercising our rights to our First Foods and practicing our religion and culture; and

WHEREAS, after years of delay, the Governor's proposal would result in another delay of, at minimum, nine to twelve months until revised standards are adopted and will depend on uncertain and unpredictable action by the Washington State Legislature in 2015; and

WHEREAS, the U.S. Environmental Protection Agency (EPA) has previously notified the State that revised water quality standards must be adopted by the end of 2014; now

THEREFORE BE IT RESOLVED, that ATNI requests that the U.S. Environmental Protection Agency uphold its commitments to tribes, and begin promulgation of surface water quality standards in Washington State that will protect human health, safeguard Treaty Rights to harvest clean, consumable fish, and uphold its commitment to Environmental Justice for tribal communities; and

BE IT FURTHER RESOLVED, that ATNI opposes and rejects Washington Governor Jay Inslee's proposal and his policy choices for revising surface water quality standards, in particular his decision to use a risk level that is 10 times less protective against cancer; and

BE IT FURTHER RESOLVED, that ATNI specifically finds that the proposal to make revising water quality standards contingent upon legislative action sets an unacceptable precedent for Clean Water Act rulemaking, and will result in additional unnecessary delay, if not abandonment, of efforts to revise standards; and

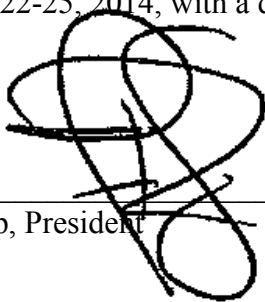
BE IT FURTHER RESOLVED, that ATNI urges EPA to similarly oppose and reject Governor Inslee's proposal, and refuse to tolerate additional delays in rulemaking; and

BE IT FURTHER RESOLVED, that ATNI encourages EPA, in determining its response to the Governor's proposal, to consider as the ultimate deciding factors: (1) honoring Treaty Rights to non-toxic fish, (2) fulfilling its Trust Responsibility to affected tribes, and (3) implementing its Environmental Justice Policy; and

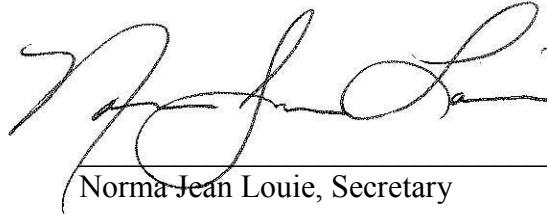
BE IT FINALLY RESOLVED, that ATNI urges EPA to immediately initiate the process to promulgate surface water quality standards for the State of Washington that adequately protect tribal people and others, using at minimum a compromise 175 grams per day Fish Consumption Rate and a cancer risk level of 1 in one million.

CERTIFICATION

The foregoing resolution was adopted at the 2014 Annual Convention of the Affiliated Tribes of Northwest Indians, held at the Wildhorse Resort and Casino, in Mission, Oregon, on September 22-25, 2014, with a quorum present.



Fawn Sharp, President



Norma Jean Louie, Secretary



2013 Mid-Year Convention Airway Heights, Washington

RESOLUTION #13 - 44

“REDUCE CANCER RISK TO TRIBAL FISH CONSUMERS TO AT LEAST ONE IN ONE MILLION

PREAMBLE

We the members of the Affiliated Tribes of Northwest Indians (ATNI) of the United States, invoking the divine blessing of the Creator upon our efforts and purposes, in order to preserve for ourselves and our descendants rights secured under Indian Treaties, Executive Orders, and benefits to which we are entitled under the laws and constitution of the United States and several states, to enlighten the public toward a better understanding of the Indian people, to preserve Indian cultural values, and otherwise to promote the welfare of the Indian people, do hereby establish and submit the following resolution:

WHEREAS, the ATNI are representatives of and advocates for national, regional, and specific tribal concerns; and

WHEREAS, ATNI is a regional organization comprised of American Indians/Alaska Natives and tribes in the states of Washington, Idaho, Oregon, Montana, Nevada, Northern California, and Alaska; and

WHEREAS, promotion of the health, safety, welfare, education, economic and employment opportunity of native people, and preservation of their cultural and natural resources are primary goals and objectives of the ATNI; and

WHEREAS, since time immemorial, we the first people of the Pacific Northwest have cared for and sustained the First Foods beginning with the pure water that we hold sacred and are guided by our traditional religious and cultural practices, are obligated to take action now to care for the water for the next seven generations; and

WHEREAS, many waters throughout the Pacific Northwest now contain unsafe levels of toxic contamination causing native people to face unacceptable health risks due to their consumption of shellfish and fish from these waters; and

WHEREAS, national Environmental Protection Agency (EPA) guidance allows subsistence fishermen to be exposed to cancer risks that are 100 times greater than those of the general population; and

WHEREAS, numerous regional fish consumption surveys show that this guidance has a disproportionate health impact in Native American communities, where a higher percentage of the population eats significant amounts of fish in comparison to the general population; and

WHEREAS, the application of standards that disproportionately and negatively impact tribal communities is prohibited by EPA's tribal trust responsibility, and EPA is required to uphold its national environmental justice policies; and

WHEREAS, EPA has effectively repudiated the applicability of its national cancer risk guidance to Native Americans in the Pacific Northwest by disapproving water quality standards submitted by Oregon and Idaho that were consistent with the risk thresholds for subsistence fishermen set forth in national guidance; and

WHEREAS, numerous regional fish consumption surveys show that this guidance has a disproportionate health impact in Native American communities, where a higher percentage of the population eats significant amounts of fish in comparison to the general population; and

WHEREAS, EPA relied upon these surveys to support its disapproval of water quality standards submitted by Oregon and Idaho that were consistent with the risk thresholds for subsistence fishermen set forth in national guidance which effectively repudiated the applicability of its national cancer risk guidance to Indian people in the Pacific Northwest; and

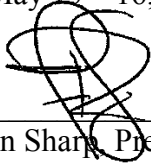
WHEREAS, formalization of this position throughout the Pacific Northwest is necessary to protect and improve human and environmental health through water quality and sediment standards for the benefit of natural resources, First Foods, and indigenous people throughout our region; and

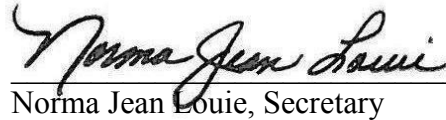
WHEREAS, protecting Native Americans will protect all people who benefit the most from the beneficial use of fish consumption; now

THEREFORE BE IT RESOLVED, that ATNI does hereby request that EPA immediately establish a regional and/or national policy that ensures that all Native American fish consumers will be protected to an incremental cancer risk threshold that is at least as protective as the threshold for the general population of 1 in 1,000,000, and consistent with ATNI Resolution #12-54 to accomplish a tribal fish consumption rate of no less than 175 grams per day for human health criteria rulemaking in the Pacific Northwest.

CERTIFICATION

The foregoing resolution was adopted at the 2013 Mid-Year Convention of the Affiliated Tribes of Northwest Indians, held at Northern Quest Resort Casino, Airway Heights, Washington on May 13 – 16, 2013 with a quorum present.



Fawn Sharp, President

Norma Jean Louie, Secretary



NATIONAL CONGRESS OF AMERICAN INDIANS

The National Congress of American Indians Resolution #REN-13-051

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Central Council of Tlingit & Haida Indian Tribes of Alaska

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Jamestown S'Klallam Tribe

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Cherokee Nation

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Sisseton Walapeton

MIDWEST

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Pokagon Band of Potawatomi

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Lumbee Tribe

SOUTHERN PLAINS

George Thurman

Sac and Fox Nation

SOUTHWEST

Joe Garcia

Ohkay Owingeb

WESTERN

Ned Norris, Jr

Tobacco O'eliam Nation

EXECUTIVE DIRECTOR

Jacqueline Johnson Pata

Tlingit

NCAI HEADQUARTERS

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TITLE: Reduce Cancer Risk to Tribal Fish Consumers to at Least One in One Million

WHEREAS, we, the members of the National Congress of American Indians of the United States, invoking the divine blessing of the Creator upon our efforts and purposes, in order to preserve for ourselves and our descendants the inherent sovereign rights of our Indian nations, rights secured under Indian treaties and agreements with the United States, and all other rights and benefits to which we are entitled under the laws and Constitution of the United States, to enlighten the public toward a better understanding of the Indian people, to preserve Indian cultural values, and otherwise promote the health, safety and welfare of the Indian people, do hereby establish and submit the following resolution; and

WHEREAS, the National Congress of American Indians (NCAI) was established in 1944 and is the oldest and largest national organization of American Indian and Alaska Native tribal governments; and

WHEREAS, since time immemorial, we the first people of the Pacific Northwest have cared for and sustained the First Foods beginning with the pure water that we hold sacred and are guided by our traditional religious and cultural practices, are obligated to take action now to care for the water for the next seven generations; and

WHEREAS, many waters throughout the Pacific Northwest now contain unsafe levels of toxic contamination causing native people to face unacceptable health risks due to their consumption of shellfish and fish from these waters; and

WHEREAS, national Environmental Protection Agency (EPA) guidance allows subsistence fishermen to be exposed to cancer risks that are 100 times greater than those of the general population; and

WHEREAS, numerous regional fish consumption surveys show that this guidance has a disproportionate health impact in Native American communities, where a higher percentage of the population eats significant amounts of fish in comparison to the general population; and

WHEREAS, the application of standards that disproportionately and negatively impact tribal communities is prohibited by EPA's tribal trust responsibility, and EPA is required to uphold its national environmental justice policies; and

WHEREAS, EPA has effectively repudiated the applicability of its national cancer risk guidance to Native Americans in the Pacific Northwest by disapproving water quality standards submitted by Oregon and Idaho that were consistent with the risk thresholds for subsistence fishermen set forth in national guidance; and

WHEREAS, numerous regional fish consumption surveys show that this guidance has a disproportionate health impact in Native American communities, where a higher percentage of the population eats significant amounts of fish in comparison to the general population; and

WHEREAS, EPA relied upon these surveys to support its disapproval of water quality standards submitted by Oregon and Idaho that were consistent with the risk thresholds for subsistence fishermen set forth in national guidance which effectively repudiated the applicability of its national cancer risk guidance to Indian people in the Pacific Northwest; and

WHEREAS, formalization of this position throughout the Pacific Northwest is necessary to protect and improve human and environmental health through water quality and sediment standards for the benefit of natural resources, First Foods, and indigenous people throughout our region; and

WHEREAS, protecting Native Americans will protect all people who benefit the most from the beneficial use of fish consumption.

NOW THEREFORE BE IT RESOLVED, that NCAI does hereby request that EPA immediately establish a regional and/or national policy that ensures that all Native American fish consumers will be protected to an incremental cancer risk threshold that is at least as protective as the threshold for the general population of 1 in 1,000,000, and consistent with NCAI Resolution #12-54 to accomplish a tribal fish consumption rate of no less than 175 grams per day for human health criteria rulemaking in the Pacific Northwest; and

BE IT FURTHER RESOLVED, that this resolution shall be the policy of NCAI until it is withdrawn or modified by subsequent resolution.

CERTIFICATION

The foregoing resolution was adopted by the General Assembly at the 2013 Midyear Session of the National Congress of American Indians, held at the Atlantis Casino from June 24 - 27, 2013 in Reno, Nevada with a quorum present.


President

ATTEST:


Recording Secretary



Submitted Electronically to: www.epa.gov/tp/consultation/comments-EJ.htm,
indigenous-ejpolicv@epa.gov, and addressees below

June 5, 2014

Ms. Dona Harris
American Indian Environmental Office
U.S. Environmental Protection Agency
Mail Code 2690-R
1300 Pennsylvania Avenue, N.W.
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harris.dona@epa.gov

Mr. Daniel Gogal
US Environmental Protection Agency
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Washington, DC 20004
Gogal.Danny@epa.gov

Re: Comments on “EPA Policy on Environmental Justice for Working with Federally
Recognized Tribes and Indigenous People”

Dear Ms. Harris and Mr. Gogal:

The Confederated Tribes of the Umatilla Indian Reservation (CTUIR) Department of Natural Resources (DNR) appreciates the opportunity to comment on the “EPA Policy on Environmental Justice for Working with Federally Recognized Tribes and Indigenous People” (Policy).¹

CTUIR Rights and Interests

The CTUIR is a federally recognized Indian tribe. In the Treaty of 1855 with the United States (12 Stat. 945), we secured forever our pre-existing “right of taking fish” exclusively on our reservation and at all “usual and accustomed stations” on rivers off-reservation in common with other citizens throughout the Pacific Northwest. The historical geographic scope of our activities was enormous. Our ancestors ceded 6.4 million acres of land to the federal government in exchange for the promise of fish in the Treaty. Farther beyond, we fished, hunted, gathered plants and engaged in trade with multiple tribes across vast portions of the landscape, in our traditional aboriginal use areas.

The “right of taking fish” includes the right of having fish to take. The fish that we have the right to take must also be free of toxic chemicals and contaminants—our ancestors did not sign a treaty to take poisoned fish, or fish that would pose a danger to their lives and health and that of their children and grandchildren. Thus, implicit in, and essential to, our right to fish is the right to water—**clean** water. Water is the first of our First Foods. Ceremonies in our longhouse begin and end with water. It is woven into the fabric of our religion, culture and way of life. It is necessary for our fisheries, which require water both in sufficient quantities and of adequate quality to sustain healthy fish populations. A primary mission of the CTUIR’s governing body is to improve the health of our valued rivers and streams and their waters which nurture us.

¹ Designated by EPA as “Revised Draft April 2014 - Consultation Version.”

The CTUIR has adopted on-reservation water quality standards incorporating a fish consumption rate that more accurately represents consumption by tribal members. We were the driving force in convincing the State of Oregon to ultimately adopt standards that also reflected higher tribal fish consumption after a decade-long process. We are now engaged in current efforts in both Washington and Idaho to revise weak, inadequate standards that are based on outdated, inaccurate consumption rates.

Our goal in all of these processes has been to achieve actual reductions in pollution, to ensure that environmental conditions necessary to fully honor our Treaty Rights are restored, and ultimately, to seek Environmental Justice. Our concerns extend beyond just water. Healthy fish (and human) populations also require healthy land resources and air quality. The Environmental Protection Agency (EPA) and States acting under EPA's delegated authority exercise substantial control over all these resources.

"Treaties" and "Treaty Rights" Absent from Policy

We appreciate EPA's attention to the important issue of Environmental Justice for Indian tribes.² Tribal members and many other groups in the United States have long suffered from the impacts of environmental *injustice*. However, it should be noted at the outset that sovereign tribes and their members are not simply another "sensitive sub-population,"³ but in actuality possess a distinct and unique status different from all other groups. Many tribes have treaties with the United States, and all tribes are the beneficiaries of a Trust Responsibility owed to them by the federal government and its agencies. The Policy needs to recognize this distinction and the special legal status it conveys.

The word "treaties" appears once in the Policy:

The EPA recognizes the right of the tribal governments to self-determination and acknowledges the federal government's trust responsibility to tribes, based on the Constitution, treaties, statutes, executive orders, and court decisions. (Principle 8, p. 4)

We appreciate this recognition. However, issues raised by the existence of treaties and Treaty Rights are not addressed in the Policy. Treaties are "the Supreme Law of the Land" pursuant to the U.S. Constitution. The Trust Responsibility entails a federal duty to protect and safeguard tribal trust resources and assets (like water and fish). Across the nation many water bodies and multiple fish species are contaminated by various pollutants. Thousands of miles of waterways are listed as water-quality-limited and thousands of fish advisories have been issued. This is a

² EPA defines Environmental Justice as "the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies." <http://www.epa.gov/environmentaljustice/>. "EPA has this goal for all communities and persons across this Nation. It will be achieved when everyone enjoys the same degree of protection from environmental and health hazards and equal access to the decision-making process to have a healthy environment in which to live, learn, and work." *Id.*

³ See <http://water.epa.gov/scitech/swguidance/standards/criteria/health/methodology/upload/hhfaqs.pdf>.

testament to the fact that treaties have **not** been honored, the Trust Responsibility has **not** been fulfilled, and tribes are subject to continuing environmental injustice. A vigorous, meaningful Environmental Justice Policy, effectively implemented, can help in honoring Treaty Rights and fulfilling the Trust Responsibility. They can operate in a mutually-reinforcing manner.

Applicability of Policy to State Actions Delegated and/or Funded by EPA

The Policy has many worthwhile elements. We support Principles 1 through 7 (p.3). They should apply not only to programs that EPA conducts and implements itself, but also to those delegated to and implemented by the States. Most prior and existing state water quality standards in the Pacific Northwest have been reviewed and accepted by EPA notwithstanding the fact that they are unjust to tribes. These standards effectively penalize our members for exercising their Treaty Rights and engaging in traditional cultural practices that increase their exposure to substantial health risks. Some efforts have been taken (or are underway) to address these disparities, such as reassessment of water quality standards and the consumption rates on which they are based. EPA will play a significant role in achieving successful outcomes as these processes to revise standards continue.

The Policy mentions the relationship between EPA and the States in Principle 16 (p. 5):

The EPA encourages federal agencies and state and local governments to incorporate environmental justice principles into their policies and programs that may affect tribes, indigenous peoples, and others living in tribal areas.

The Policy can be strengthened in this regard. Stronger actions other than mere “encouragement” should be considered. EPA should commit to using its authorities to uphold treaties, fulfill its Trust Responsibility, and secure compliance with the principles of Environmental Justice when both administering programs itself and in evaluating those of the States. State programs and actions that do not adhere to the principles of Environmental Justice should not be supported or approved by EPA.

For example, EPA should not approve State water quality standards for human health that do not adequately protect tribal members that consume much higher-than-average amounts of fish. The agency should also specifically consider tribal fish consumption in exposure assessments of chemicals that are persistent, bioaccumulative, and toxic.

Geographic Scope of the Policy

The Policy should apply to all areas where actions may occur or regulations may be implemented that affect tribal members and the resources (e.g., water and fish) in which tribes have rights and interests. Such areas may not be strictly limited to “Indian Country” or “tribal areas” as they are defined in the Policy.

The Policy and its principles repeatedly refer to the need to consider Environmental Justice issues in “Indian Country,” in “tribal areas,” and to people “living in tribal areas.” The definitions refer to Indian Country as defined at 18 U.S.C. § 1151 and “tribal areas” as Indian Country “and/or other land areas of interest to federally recognized tribes and indigenous peoples.” In the Pacific Northwest, Treaty Rights and the resources on which they are based extend far beyond reservation boundaries, and actions taken in distant locations (within and sometimes even beyond our traditional aboriginal use areas) can nevertheless have profound impacts on these rights and resources. For example, court-adjudicated mainstem tribal fisheries exist in the Columbia River between Bonneville and McNary Dams outside the reservations of the four tribes (including the CTUIR) which exercise fishing rights there.

Consistency Among EPA Rules, Policies and Guidance

EPA has asked for answers to the specific question (in “Input EPA is seeking”) of “how EPA should go about implementing this Policy.”⁴ An effective policy and its meaningful implementation would begin by closely reviewing existing policies and guidance, and revising them as appropriate in instances where they appear to sanction or authorize unjust or disparate treatment of tribes and their members. For example, a case currently exists in the Pacific Northwest where EPA methodology guidance has been misread to suggest that subjecting tribal members to disproportionately higher cancer and non-cancer risks is permissible.⁵ If Environmental Justice “will be achieved when everyone enjoys the same degree of protection from environmental and health hazards[,]” according to EPA’s definition, then following this guidance would perpetrate an environmental injustice. EPA cannot assert that it is pursuing Environmental Justice on the one hand while maintaining guidance that seemingly authorizes disparate treatment of certain “sub-populations” on the other.

Confidentiality of Tribal Cultural Information

Principle 7 could be strengthened to provide greater protection to sensitive tribal cultural information. It now reads:

The EPA considers confidentiality concerns regarding information on sacred sites and cultural resources, consistent with applicable laws, regulations, and policies. The EPA acknowledges that unique situations and relationships may exist in regard to sacred sites and cultural resources information for tribes and indigenous people.

EPA could possibly do more than “consider” and “acknowledge.” Potential language could read “EPA will exercise its authorities and apply Environmental Justice principles such that data and information pertaining to sacred sites, cultural resources, First Foods and traditional knowledge is protected and is not subject to dissemination beyond the agency and the affected tribe(s) to the

⁴ See, e.g., <http://www.epa.gov/environmentaljustice/indigenous/index.html>.

⁵ See EPA, Methodology for Deriving Ambient Water Quality Criteria for the Protection of Human Health (2000); http://water.epa.gov/scitech/swguidance/standards/upload/2005_05_06_criteria_humanhealth_method_complete.pdf.

CTUIR DNR Letter to EPA

Re: Comments on Revised Draft Environmental Justice Policy

June 5, 2014

Page 5 of 5

maximum extent allowed under current law.”⁶ The agency may also wish to consider whether steps can be taken to amend the existing Freedom of Information Act (FOIA) or modify implementing regulations issued under it such that “data and information pertaining to sacred sites, cultural resources, First Foods and other traditional knowledge” may be specifically exempt from FOIA provisions.

Thank you for your consideration of our comments and concerns about the revised draft Environmental Justice Policy. If you have any questions or would like to discuss this matter further, please contact Carl Merkle, Policy Analyst, at CarlMerkle@ctuir.org.

Sincerely,



Eric Quaempts
Director, Department of Natural Resources

EQ: cfm

⁶ The First Foods include water, fish, big game, plants, and roots and berries.



COLUMBIA RIVER INTER-TRIBAL FISH COMMISSION

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Portland, Oregon 97232

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www.critfc.org

June 3, 2014

Danny Gogal
US Environmental Protection Agency
Office of Environmental Justice
1200 Pennsylvania Avenue, NW
Mail Code 2201- A
Washington, DC 20460

RE: EPA Policy on Environmental Justice for Working with Federally Recognized Tribes and Indigenous Peoples

Dear Mr. Gogal:

The Columbia River Inter-Tribal Fish Commission (CRITFC) appreciates that the EPA is planning to implement the Agency's environmental justice priorities. Thank you for the opportunity to provide our recommendations on how the Agency can better integrate environmental justice principles into practice. For the 20,000 citizens of CRITFC's member tribes, the Columbia River watershed is central to a culture and way of life that has been highly impacted by negligent environmental practices and weak environmental regulations. To better protect our fishery resources and the people that depend on them, CRITFC recommends that:

- EPA should not approve state human health based water quality standard criteria that do not adequately protect high fish consuming tribal members;
- EPA should amend guidance as articulated in the 2000 Human Health Methodology that recommends to regulators that cancer risk levels of 1 in 10,000 are sufficient for sensitive sub-populations like tribal members while acceptable cancer risk levels for the general population are 1 in 1,000,000 or 1 in 100,000; and
- EPA should specifically consider tribal fish consumption in exposure assessments of chemicals that have persistent, bioaccumulative, and toxic properties.

Background and Justification: More than twenty years ago in cooperation with the EPA and the Center for Disease Control, CRITFC conducted a survey of the fish consumption rates and patterns of tribal members who reside in and consume fish from the Columbia River Basin (A Fish Consumption Survey of the Umatilla, Nez Perce, Yakama and Warm Springs Tribes of the Columbia River Basin, October 1994). The conclusions of the survey were clear. Columbia River tribal peoples consume fish at nine to twelve times the national average rate that was being

used at that time to establish water quality standards and to conduct chemical exposure assessments.

More than thirteen years ago, the National Environmental Justice Advisory Council published a report entitled "Fish Consumption and Environmental Justice, November 2002" which provided recommendations on how EPA could improve the quality of aquatic ecosystems and protect the health of fish consuming people. The recommendations included taking stronger steps to prevent and reduce the release of persistent, bioaccumulative toxics into the nation's aquatic resources by making full use of the authority of federal environmental laws and the trust responsibility of the Agency. Despite documented evidence of high fish consumption and these strong recommendations, our tribes continue to be disproportionately impacted by weak environmental protections.

In 2011, Oregon became the first state in the nation to adopt water quality standards based on a fish consumption rate and cancer risk level that are protective of tribal members. Unfortunately, the states of Washington and Idaho continue to resist following the lead of Oregon and updating their own surface water quality standards. Both the Washington Department of Ecology and the Idaho Department of Environmental Quality have publically stated that a cancer risk level less stringent than current levels would be acceptable for setting surface water quality standards **per EPA guidance**. EPA should make clear to states in the Columbia River watershed that the Agency's environmental justice policy supports setting water quality standards that are protective of high fish consuming tribal members and establishing cancer risk levels that are protective of all populations.

In 2010, EPA published an exposure assessment of polybrominated diphenyl ethers (PBDE) which are of great concern to CRITFC tribes because the body burden of these flame retardants continues to increase in the tissue of fish from the Columbia River. The assessment reported that concentration of PBDE in fish from open water environments are much higher (10-1000 ppb) than farmed fish or fish obtained from marketplaces (1-5 ppb). To represent exposure to PBDE from fish consumption, the authors used a sampling of fish from supermarkets in Dallas, TX for the concentration of PBDE in fish (0.32 ppb for finfish and 5.7 ppb for shellfish) and used a fish consumption rate of 11.6 grams/day for finfish and 3.8 grams/day for shellfish. Tribal exposure to PBDE was substantially underestimated using these assumptions. Fish consumption rates for tribal members in the Pacific Northwest can be orders of magnitude higher than the general population (175 grams/day), and fish is generally harvested from open water environments. The assessment overlooked reasonable risks to fish consuming tribal populations and thus missed the identification of significant exposure pathways. This exposure assessment was a lost opportunity to establish the evidence needed to advocate for and establish corrective regulatory controls that would better protect the health of high fish consuming tribal members as well as the general population.

CRITFC looks forward to continued interaction with you on these important issues, as the Agency moves forward to implement the principles of environmental justice as outlined in EPA's draft policy. Thank you for considering these comments and suggestions. If you have any further questions please contact me or Dianne Barton at 503-238-0667.

Sincerely,

A handwritten signature in blue ink, appearing to read "Babbist Paul Lumley". The signature is stylized with a large initial "B" and a long horizontal stroke.

Babbist Paul Lumley
Executive Director

Cc: Jane Nishida, Acting Assistant Administrator, Office of International & Tribal Affairs
Dennis McLerran, Administrator, EPA Region 10
Jim Woods, Tribal Liaison, EPA Region 10



2012 Annual Convention Pendleton, OR

RESOLUTION #12 - 54

**"REQUESTING THAT THE U.S. ENVIRONMENTAL PROTECTION AGENCY
ACCOMPLISH A FISH CONSUMPTION RATE OF NO LESS THAN 175 GRAMS PER DAY
FOR HUMAN HEALTH CRITERIA RULEMAKING IN THE PACIFIC NORTHWEST"**

PREAMBLE

We, the members of the Affiliated Tribes of Northwest Indians of the United States, invoking the divine blessing of the Creator upon our efforts and purposes, in order to preserve for ourselves and our descendants rights secured under Indian Treaties, Executive Orders, and benefits to which we are entitled under the laws and constitution of the United States and several states, to enlighten the public toward a better understanding of the Indian people, to preserve Indian cultural values, and otherwise to promote the welfare of the Indian people, do hereby establish and submit the following resolution:

WHEREAS, the Affiliated Tribes of Northwest Indians (ATNI) are representatives of and advocates for national, regional, and specific tribal concerns; and

WHEREAS, ATNI is a regional organization comprised of American Indians/Alaska Natives and tribes in the states of Washington, Idaho, Oregon, Montana, Nevada, Northern California, and Alaska; and

WHEREAS, the health, safety, welfare, education, economic and employment opportunity, and preservation of cultural and natural resources are primary goals and objectives of the ATNI; and

WHEREAS, throughout time immemorial we as the first people of the Pacific Northwest have cared for and sustained the First Foods beginning with the pure water that we hold sacred,

and guided by our traditional religious and cultural practices, we are obligated to take action now to care for the water for the next seven generations; and

WHEREAS, numerous robust, valid, reputable scientific studies unfortunately have shown that shellfish and fish, including salmon and resident fish consumed by native people in the Pacific Northwest, exposes them to toxic contaminants and poses a human health risk; and

WHEREAS, scientific surveys have shown that native people in the Pacific Northwest today eat 300 – 500 grams of fish per day which is down from historical rates of more than 800 grams per day reflecting ceremonial, subsistence and other fishing practices which are secured by treaties and executive orders with the United States; and

WHEREAS, ATNI recognizes and appreciates that in 2011 Oregon adopted, and the U.S. Environmental Protection Agency (EPA) approved water quality standards based on a fish consumption rate of 175 grams per day; and

WHEREAS, on May 10, 2012 the EPA disapproved Idaho's request to use a fish consumption rate of 17.5 grams per day when deriving water quality criteria; and

WHEREAS, tribes need immediate assistance from EPA to continue to build capacity to develop and in some cases update tribal fish consumption rates; and

WHEREAS, tribes in the Pacific Northwest are concerned that EPA has long had knowledge of scientifically sound data concerning known tribal fish consumption levels and yet fails to enforce existing laws (i.e., the Clean Water Act) to protect fish consuming populations and acquiesces to the very industries and corporations they regulate; and

WHEREAS, tribes in the Pacific Northwest must coordinate to protect and improve human and environmental health through water quality and sediment standards for the benefit of natural resources, First Foods, and indigenous people everywhere; and

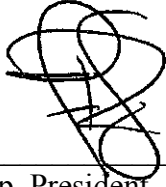
WHEREAS, adopting higher, more accurate fish consumption rates benefits not only tribal people, but all citizens, in the Pacific Northwest who consume fish and value a cleaner and more healthy environment; now

THEREFORE BE IT RESOLVED, that ATNI does hereby request that EPA immediately take necessary and appropriate steps to establish a federal default fish consumption rate of no less than 175 grams per day for Oregon, Washington, and Idaho to support and guide water quality and sediment management standards; and

BE IF FURTHER RESOLVED, and to use the EPA General Assistance Program to fund Tribal capacity efforts to develop and update Tribal fish consumption rates.

CERTIFICATION

The foregoing resolution was adopted at the 2012 Annual Convention of the Affiliated Tribes of Northwest Indians, held at the Wildhorse Resort & Casino in Pendleton, Oregon on September 24 – 27, 2012 with a quorum present.



Fawn Sharp, President

Norma Jean Louie, Secretary

Update Tribal Governments in Idaho Fish Consumption Surveys

1

IDAHO NEGOTIATED RULEMAKING MEETING

OCTOBER 1, 2014

MARY LOU SOSCIA, EPA-R10

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LON KISSINGER, EPA-R10

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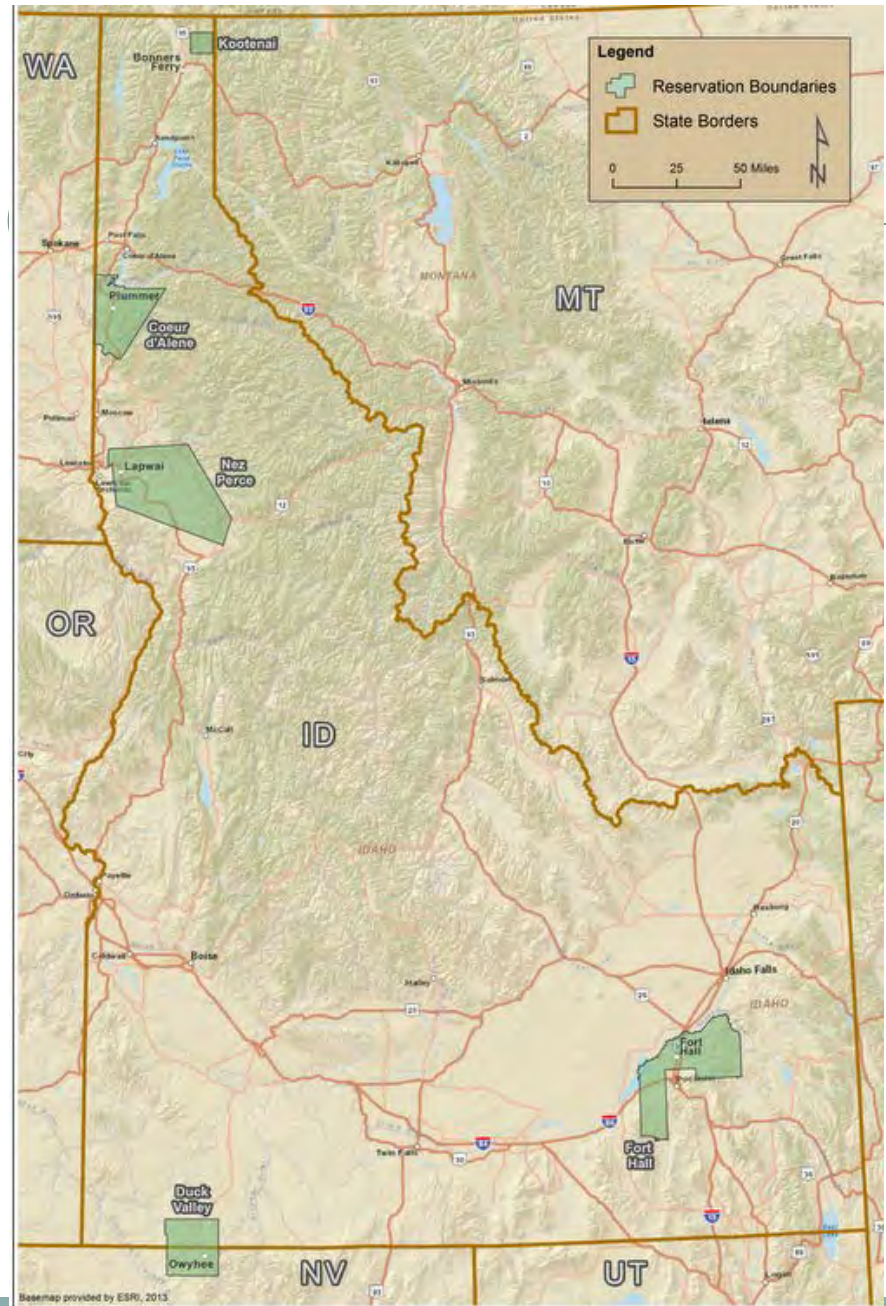
Update: ID Tribal Fish Consumption Surveys

2

- Review General Background of Work Effort
- Tribal Fish Consumption Survey Work Efforts
- Tribal Heritage Rate Study Work Efforts
- Next Steps

TRIBES IN IDAHO

- Kootenai Tribe of Idaho
- Coeur D'Alene Tribe
- Nez Perce Tribe
- Shoshone-Bannock Tribes (Fort Hall)
- Shoshone-Paiute Tribes (Duck Valley)



Understanding Tribal Fish Consumption

General Background

4

- Tribal Governments in ID have been working w/ EPA to plan a 2015 survey on types and amounts of fish consumed by tribal people
- Support provided through EPA Indian General Assistance Program funds, administered through an EPA contract
- Outcome - build tribal environmental capacity and inform future tribal/EPA WQS decisions
- Ongoing EPA commitment to share information on Tribal work @ ID DEQ Negotiated Rulemaking Meetings

Purpose of Surveys

5

Purpose of the Tribal Surveys

- Tribal environmental capacity building
- Determine current & heritage fish consumption rates
- Understand causes of & reasons for suppression
& hopes for the future
- Potential use in development of Tribal water quality standards
- Potential use by Idaho DEQ

Differences in Surveys

- ✦ Kootenai, Coeur d'Alene and Shoshone Paiute have elected to not participate in a quantitative survey

Tribal Survey Design

6

Current Rate/Quantitative Study

- ✦ Approximately 1 hour in person interviews with Tribal members which include the use of 3-D portion models
- ✦ For NCI Method - Follow up 20 minute phone call, the interview repeats a subset of questions on the 24-hour dietary recall

Heritage Rate Study

- ✦ Evaluate historical and recent literature
- ✦ Develop range of rates for each Tribe

Tribal Survey Implementation

7

- Board Approvals on Methodology
- Tribal Interviewers
 - Nez Perce and Shoshone-Bannock Tribal interviewers
 - All Tribal members
- Training/Mentoring
- Mock interviews
- Pilot Test – April/May
- Live interviews began in May 2014
- Target sample is 800 for both Shoshone Bannock and Nez Perce Tribe for FFQ Methodology
- Interviews ongoing
- Quality Control ongoing
- Portion Size Models and Supplemental Photos Used

Tribal Heritage Rate Studies

8

- Heritage rate studies will be completed for all 5 ID Tribes
- Survey implementation team has compiled a list of historical and recent literature to inform the heritage rate studies.
- Draft heritage studies have been provided to tribes.
- Tribal Govts will be conducting appropriate review of draft studies.
- Final studies will provide a range of rates specific to each Tribe – expected March 2015.

Heritage Studies

9

- Summary of Historical Fish Harvest and Consumption
- Summary of Causes of Decline in Fish Populations
- Discussion of Heritage Fish Consumption
- Columbia Basin-Wide Heritage Rates
- Proposed Tribal Heritage Rates
- References

Schedule

10

Tribal Schedule (12-month data collection)

4/30/15 – Preliminary FCR to ID (based on FFQ, not peer reviewed)

7/15/15 – Draft FCR to ID (based on all data, not peer reviewed)

9/30/15 – Final Tribal FCR Report to ID (peer reviewed)

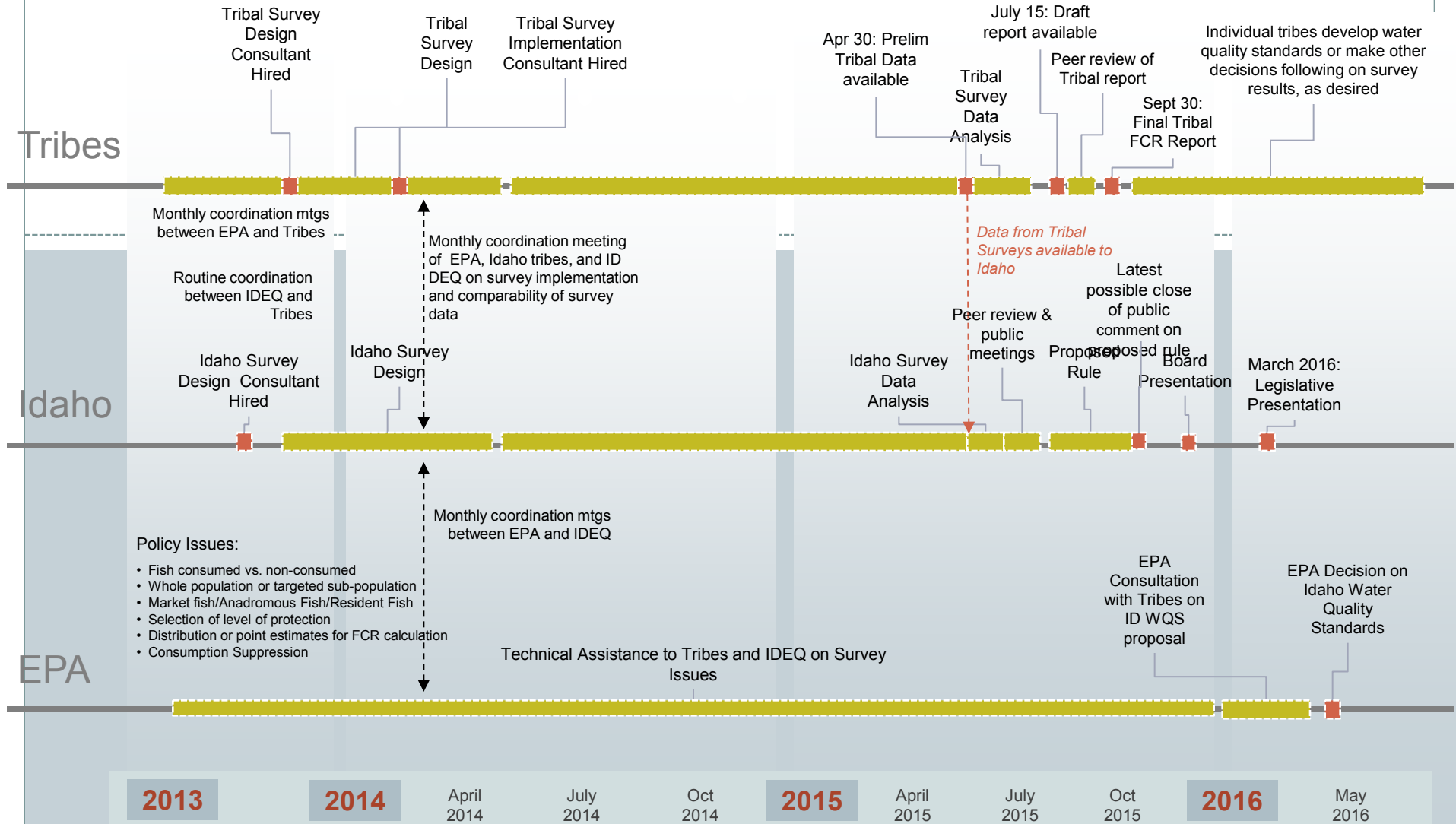
Idaho DEQ Schedule

May 2015 – ID peer review begins

8/4/15 – ID Bulletin publication of proposed rule

10/4/15 – Close of ID public comment period (based on 60 day period; the comment period will be at least 30 days so the period may end before 10/4/15)

Timeline for Idaho Tribal Fish Consumption Work Effort



Next Steps

12

- Continue collaboration with Tribal Govts/Consortia /ID DEQ/EPA to coordinate work efforts
- Continue in-person fish consumption survey interviews with Nez Perce and Shoshone-Bannock tribal members
- Work with Tribal Governments on finalizing Heritage Studies



UPPER SNAKE RIVER TRIBES FOUNDATION, INC.

413 W. Idaho Street, Suite 101, Boise, Idaho 83702

(208) 331-7880

November 4, 2014

Paula Wilson
IDEQ State Office
Attorney General's Office
1410 N. Hilton Street
Boise, ID 83706

**Re: Docket No. 58-0102-1201 – Upper Snake River Tribes Foundation Comments
Regarding IDEQ Discussion #6: Suppression of Fish Consumption**

Dear Ms. Wilson:

The Upper Snake River Tribes (USRT) Foundation is composed of four Indian tribes of the Upper Snake River region in Idaho, Nevada, and Oregon: the Burns Paiute Tribe, Fort McDermitt Paiute-Shoshone Tribe, Shoshone-Bannock Tribes of the Fort Hall Reservation, and Shoshone-Paiute Tribes of the Duck Valley Reservation. The four tribes have common vested interests to protect rights reserved through the United States Constitution, federal treaties, federal unratified treaties (e.g. Fort Boise Treaty of 1864 and Bruneau Treaty of 1866), executive orders, inherent rights, and aboriginal title to the land, which has never been extinguished by USRT member tribes. USRT works to ensure the protection, enhancement, and preservation of the tribes' rights, resources, cultural properties, and practices and that they remain secured. These include but are not limited to hunting, fishing, gathering, and subsistence uses.

USRT would like to thank the Idaho Department of Environmental Quality (IDEQ) for the opportunity to comment on the Idaho Fish Consumption Rate and Human Health Water Quality Criteria – Discussion Topic #6: Suppression of Fish Consumption. Further, USRT appreciates the invitation IDEQ extended to two Idaho tribal members (Chad Colter (Shoshone-Bannock Tribes) and Joe Oatman (Nez Perce Tribe)) to present the tribal perspective of suppression at the October 2nd rulemaking session. No other group in Idaho has felt the profound effects of suppression more than have tribal members. It has not only impacted their sustenance needs but also their cultural and spiritual well-being.

IDEQ has the unique opportunity during this rulemaking process to evaluate how suppression, both through "contamination (i.e. polluted fish)" and "depletion (i.e. reduced fish numbers)," has affected fish consumption patterns in Idaho. However, to date, it appears that IDEQ is letting this opportunity slip away with very little thought or discussion. This is in no way meant to diminish the illustrative and powerful presentations given by Mr. Colter and Mr. Oatman, but to highlight the

fact that IDEQ placed the burden on the tribes to discuss suppression on October 2nd. Prior to the October 2nd rulemaking session, IDEQ has produced a discussion paper for all other policy discussions. Yet, no discussion paper was formulated and disseminated by IDEQ on the suppression of fish consumption. As the regulating entity, IDEQ needs to put forth the time and effort to present their interpretation of suppression and how it will be factored into revised water quality standards and a fish consumption rate. As IDEQ moves forward in their policy rulemaking/implementation method phase from December 2014 – March 2015, USRT implores the agency to take the time necessary to thoroughly evaluate and consider suppression and fully factor its impacts into revised water quality standards and commensurate fish consumption rate.

Suppression in Idaho due to contamination is of significant concern not only to the tribes, as elucidated at the October 2nd rulemaking session, but the general public, as well. Idaho's 2012 Integrated Report¹ finds that there are 13,237 river/stream miles in Idaho that are not meeting applicable water quality standards for one or more beneficial uses by one or more pollutants and thus included on the §303(d) list of impaired waters (Category 5 waters). An additional 31,287 miles in Idaho are not supporting one or more beneficial uses (Category 4 waters). Contamination in Idaho waters has caused both diminished fish numbers and bioaccumulation of toxics in living fish to the level where they are unsafe to eat. Whether real or perceived, contaminants in Idaho waters has a significant suppression effect on would be consumers.

Depletion of fish, the other major factor leading to suppression, is certainly attributable to contamination, but in Idaho is largely tied to dams and other diversion structures that impede or prevent fish migration and reproduction. Federal dams on the Columbia and Snake rivers in Oregon and Washington have caused considerable depletion or extirpation of anadromous species in Idaho. There are also dozens of major dams and several hundred smaller dams and diversion structures in Idaho that adversely affect or block fish migration and passage. Without question fish depletion in Idaho has caused the most harm to the tribes, most notably to their traditional lifeways and in their ability to consume fish at the level and frequency they did historically. It has been estimated that members of the Shoshone-Bannock Tribes ate as much as 800 pounds of fish per year, the equivalent of 1,000 grams of fish per day.² Historic fish consumption estimations for the Northern Paiute vary widely from as little as 143 pounds per year (178 grams/day)³ to 700 pound per year (871 grams/day)⁴.

¹ Idaho Department of Environmental Quality. 2014. Idaho's 2012 Integrated Report. Boise, ID: Idaho Department of Environmental Quality.

² Scholz, A., K. O'Laughlin, D. Geist, D. Peone, J. Uehara, L. Fields, T. Kleist, I. Zozaya, T. Peone, and K. Teesatuskie. 1985. *Compilation of Information on Salmon and Steelhead Total Run Size, Catch and Hydropower Related Losses in the Upper Columbia River Basin, above Grand Coulee Dam*. Fisheries Technical Report No. 2. Upper Columbia United Tribes Fisheries Center, Eastern Washington University, Department of Biology. Cheney, Washington 99004.

December Tooze, J., et. al. 2006. A new statistical method for estimating the usual intake of episodically consumed foods with application to their distribution. *Journal of the American Dietetic Association* 106:10, 2006, pp. 1575-1587.

³ United States Senate Committee on Indian Affairs (U.S. Senate). 2007. Shoshone-Paiute Tribes of Duck Valley Water Rights Settlement Act Hearing. One Hundred First Congress, First Session. April 26, 2007.

⁴ Upper Snake River Tribes Foundation. 2012. Northwest Power and Conservation Council Presentation. Boise, Idaho. 8 August 2012.

Taken together, contamination and depletion in Idaho has led to the suppressed consumption of fish most distinctly for Indian tribes, but also for other subpopulations and the general public. This is a known and substantiated fact. Thus, for IDEQ to devise revised water quality standards based on a current fish consumption rate would not only be harmful to the health of all Idahoans, particularly high fish consumers, but set the state on a never-ending path of diminishing water quality standards and fish consumption rates.

The never-ending path, otherwise known as the “downward spiral,” is a concept articulated previously by the Environmental Protection Agency (EPA) and the National Environmental Justice Advisory Council. In *Fish Consumption and Environmental Justice* (2002)⁵, it is stated:

A suppression effect occurs when a fish consumption rate for a given subpopulation reflects a current level of consumption that is artificially diminished from an appropriate baseline level of consumption for that subpopulation . . . When agencies set environmental standards using a fish consumption rate based upon an artificially diminished consumption level, they may set in motion a downward spiral whereby the resulting water quality standards permit further contamination and/or depletion of the fish and aquatic resources.

More recently, EPA reiterated this position in their *Human Health Ambient Water Quality Criteria and Fish Consumption Rates Frequently Asked Questions* (2013)⁶. Under the goals of the human health ambient water quality criteria, EPA states:

It is also important to avoid any suppression effect that may occur when a fish consumption rate for a given subpopulation reflects an artificially diminished level of consumption from an appropriate baseline level of consumption for that subpopulation because of a perception that fish are contaminated with pollutants.

It is paramount that IDEQ does not take Idaho’s water quality standards and fish consumption rate on the downward spiral. Unfortunately, given the minimal emphasis IDEQ is placing on the suppression effect, it is difficult to ascertain how the agency will refrain from going down a path of accepting diminishing water quality standards and fish consumption rate. IDEQ’s engagement in a general population and recreational angler fish consumption survey will provide a statistical estimation of the contemporary level of fish consumption in Idaho. But, of what value is there in knowing what the general population and anglers are currently eating given the condition of Idaho waters? It has already been noted here that there are thousands of miles of impaired rivers and streams in Idaho. Further, the Idaho Department of Health and Welfare (IDHW) has imposed a statewide mercury advisory for bass (largemouth and smallmouth) in all lakes, rivers, reservoirs, and other water bodies in Idaho.⁷ Additionally, there are IDHW-imposed fish consumption advisories on 22 creeks, lakes, reservoirs, and rivers in northern and southern Idaho.⁸ The species of fish on the 22 water bodies are varied and include: bluegill, brown trout, bullhead, carp, catfish,

⁵ Environmental Protection Agency and the National Environmental Justice Advisory Council. 2002. http://www.epa.gov/environmentaljustice/resources/publications/nejac/fish-consump-report_1102.pdf

⁶ <http://water.epa.gov/scitech/swguidance/standards/criteria/health/methodology/upload/hhfaqs.pdf>

⁷ Idaho Department of Health and Welfare. ND. Eat Fish, Be Smart, Choose Wisely: A guide to safe fish consumption for fish caught in Idaho waters. <http://healthandwelfare.idaho.gov/Portals/0/Health/EnvironmentalHealth/FishGuide.pdf>

⁸ Ibid.

crappie, cutthroat trout, kokanee, Lahontan cutthroat trout, lake trout, perch, rainbow trout, redband trout, sucker, Utah sucker, walleye, whitefish, and yellow perch.

If it is IDEQ's strategy to take the results of the contemporary general population/angler survey and use that number to devise Idaho's revised water quality standards and fish consumption rate then the downward spiral has begun. While the Nez Perce Tribe and Shoshone-Bannock Tribes are also in the process of undertaking a contemporary fish consumption survey, they have employed a suite of measures to document the forces of suppression and identify their respective heritage fish consumption rates. This approach, while unique for Idaho tribes, is not unlike what has been done recently by the Lummi, Spokane, Suquamish, and Swinomish tribes. Tribes throughout the country have recognized, as must IDEQ, that contemporary fish consumption rates are not an appropriate baseline for determining water quality standards given the effects of contamination and depletion. For tribes, the baseline is the ability to harvest and consume fish at a level that fully and healthfully fulfills their rights reserved through the United States Constitution, federal treaties, federal unratified treaties, executive orders, inherent rights, and aboriginal title to the land.

As was so eloquently stated by Seattle University law professor Catherine O'Neill, when "we set risk-based standards based on assumptions about exposure measured in this bleak period, we aim for a future that is not improved. That is, we impose a limit on the health of our waters – and a ceiling on the safe consumption of fish from those waters – that reflects not a level of fish intake that is healthful or to which tribes are entitled, but a level that is simply equal to present, constrained practice."⁹ EPA's relevant guidance does not restrain agencies to making only present-oriented exposure assessments. Instead, it finds that exposure assessments may be past-, present-, or future-oriented. To realize the restorative goals of the Clean Water Act, "it makes sense that exposure analysis is oriented toward a future in which aquatic ecosystems are healthy and whole. And, given the tribal context, it is arguable that exposure analysis not only may but must be oriented toward a future in which the fish resource is robust and tribal members may exercise fully their right to take fish."¹⁰

The need for IDEQ to recognize the effects of suppression not only on tribes, but also the general public could not be clearer. To not do so means the continual diminishment of water quality, human health, and tribal rights in Idaho. Certainly that cannot be the outcome IDEQ wants from this process. If you have questions or remarks following review of these comments, please contact Scott Hauser, USRT Environmental Program Director, at (208) 331-7880 (office) or (208) 995-4872 (cell) and/or by email at scott.hauser@usrtf.org.

Sincerely,



Scott Hauser
Environmental Program Director

⁹ O'Neill, Catherine A. 2013. Fishable Waters. American Indian Law Journal. Vol. I, Issue II.
<http://www.law.seattleu.edu/Documents/ailj/Spring%202013/O'Neill-Fishable%20Waters.pdf>

¹⁰ Ibid.



Protection of Downstream Waters in Water Quality Standards: Frequently Asked Questions

DISCLAIMER

These Frequently Asked Questions (FAQs) do not impose legally binding requirements on the U.S. Environmental Protection Agency (EPA), states, tribes, or the regulated community, nor do they confer legal rights or impose legal obligations upon any member of the public. The Clean Water Act (CWA) provisions and the EPA regulations described in this document contain legally binding requirements. These FAQs do not constitute a regulation, nor do they change or substitute for any CWA provision or the EPA regulations.

The general description provided here may not apply to a particular situation based upon the circumstances. Interested parties are free to raise questions about the substance of these FAQs and the appropriateness of their application to a particular situation. The EPA retains the discretion to adopt approaches on a case-by-case basis that differ from those described in these FAQs where appropriate. These FAQs are a living document and may be revised periodically without public notice. The EPA welcomes public input on these FAQs at any time.

1. Why is it important that upstream designated uses and water quality criteria ensure the attainment and maintenance of downstream water quality standards?

Pursuant to sections 303 and 101(a) of the Clean Water Act (“CWA” or “the Act”), the federal regulation at 40 CFR 131.10(b) requires that *“In designating uses of a water body and the appropriate criteria for those uses, the State shall take into consideration the water quality standards of downstream waters and shall ensure that its water quality standards provide for the attainment and maintenance of the water quality standards of downstream waters.”* This provision requires states and authorized tribes (hereinafter “states/tribes”) to consider and ensure the attainment and maintenance of downstream¹ water quality standards (WQS) during the establishment of designated uses and water quality criteria in upstream² waters. Adopting either narrative or numeric criteria to ensure the attainment and maintenance of downstream WQS (i.e., designated uses, criteria and antidegradation requirements) may likely be the preferred path for states/tribes to ensure consistency with 40 CFR 131.10(b). This is especially important if there

¹ The EPA interprets the term “downstream” to include both intra- and interstate waters, as well as waters that form a boundary between adjacent jurisdictions.

² Throughout these FAQs the EPA is using the term “upstream” to include “instream” when referring to the water body(ies) for which states/tribes are developing designated uses/water quality criteria that will ensure the attainment and maintenance of downstream WQS.

are data or information suggesting that upstream designated uses and/or water quality criteria may not provide for the attainment and maintenance of downstream standards.

Designated uses and water quality criteria that ensure attainment and maintenance of downstream WQS may be important because they may help to avoid situations where downstream segments become impaired due, either in part or exclusively, to individual or multiple pollution sources located in upstream segments. Designated uses and water quality criteria that provide for the attainment and maintenance of downstream WQS may help support more equitable use of any assimilative capacity available to upstream and downstream pollution sources and/or jurisdictions and may facilitate restoration of the downstream waters. Ensuring the attainment and maintenance of downstream WQS during development of upstream designated uses and water quality criteria may also help limit and/or avoid resource-intensive water quality problems and/or legal challenges that can occur after adoption of uses and criteria that lack consideration of downstream waters' WQS. Furthermore, downstream protection consideration prevents the shifting of responsibility for pollution reductions from upstream sources and/or jurisdictions to downstream sources and/or jurisdictions. State/tribal uses and criteria that protect downstream waters may, among other things, increase the resiliency of the nation's waters to climate change and may help address environmental justice issues in urban waters. In addition, designated uses and criteria that ensure attainment and maintenance of downstream WQS facilitate consistent and efficient implementation and coordination of water quality-related management actions (e.g., water quality monitoring and assessment, development of Total Maximum Daily Loads (TMDLs) and other watershed-based restoration and protection plans, and National Pollutant Discharge Elimination System (NPDES) permitting and CWA Section 401 certifications).

Consistent with the disclaimer above, the EPA reiterates that these FAQs do not impose any additional requirements on states/tribes with regards to downstream protection beyond those requirements already identified in 40 CFR 131.10(b). States/tribes have discretion in choosing their preferred approach to downstream protection based on their individual circumstances, and these FAQs are not intended to limit a state's or tribe's discretion, provided their selected criteria approach is also consistent with 40 CFR 131.11. Furthermore, the EPA recognizes that states/tribes may not have the available resources to develop numeric criteria to protect downstream waters at this time or in the near future; therefore, these FAQs envision a hybrid approach where a state/tribe may adopt narrative criteria, numeric criteria or a combination of these criteria. In addition to the discussion of possible criteria development approaches discussed in response to Question 3, *"What are possible criteria development approaches for ensuring the attainment and maintenance of downstream WQS?"*, the EPA has developed a set of four customizable templates³ for narrative downstream protection criteria to assist states/tribes with this effort. These templates may be used to develop a "broad narrative" that provides basic legal coverage under 40 CFR 131.10(b) (e.g., applies to all waters in the state/tribe) as well as a variety of "tailored narratives" that can be developed to address specific water bodies, pollutants, and/or water body types.

³ <http://water.epa.gov/scitech/swguidance/standards/narrative.cfm>

2. What should states/tribes consider regarding downstream protection when developing and adopting upstream designated uses and water quality criteria?

- **Use a watershed approach to develop WQS.**

Early in the process of developing designated uses and/or water quality criteria, it is useful to take a step back and consider water quality at the United States Geological Service (USGS)-defined subwatershed (e.g., HUC 12) or broader geographic scale. Such an analysis could be as general or detailed as a state's or tribe's resources allow. Start by asking questions about what the most sensitive designated uses are within such a watershed, which uses are in place downstream, and what criteria are in place to protect those uses. Developing a designated use inventory and/or map⁴ that identifies uses within a watershed may help in defining the scope of potential downstream vulnerabilities. States/tribes may already have developed advanced mapping tools that can be used in this effort. It may also be useful to consider whether the uses and criteria for the downstream receiving waters are adequate or if they need to be developed, revised or refined. In addition, consider other water bodies that may flow to downstream waters and may affect hydrologic flow and/or pollutant concentrations in these locations. Also, if dealing with a subwatershed, consider which upstream subwatershed might have the greatest potential to positively or negatively impact downstream water quality (e.g., based on land characteristics and use, proximity to sensitive downstream waters, water body characteristics, stressor source and distribution). Furthermore, understanding and considering the programmatic (e.g., point and nonpoint source, assessment, listing and TMDL) and jurisdictional issues at play and any solutions in place at the subwatershed or overall watershed levels may provide useful information and help to avoid potential future conflicts.

- **Communicate and coordinate early between jurisdictions, programs, and agencies regarding shared watersheds.**

When a state/tribe is developing designated uses and water quality criteria that may affect the waters of another state or jurisdiction, early communication with the potentially affected jurisdiction(s) and with the EPA (as appropriate) is key to help define the scope of downstream protection issues and determine protective endpoints. States may also consider the administrative processes and procedures for setting WQS that are outlined in their regulations. Where possible, adjacent states/tribes may find it useful to develop WQS jointly for shared waters. States/tribes may consider creating a formal agreement (e.g., Memorandum of Understanding (MOU), joint powers agreement), developing partnerships (e.g., watershed commission), and/or including third party entities (possibly the EPA) to assist with cross-jurisdictional or cross-program communication and coordination. Also, the EPA/states/tribes may consider developing an electronic communications clearinghouse that can be used to coordinate complex issues with multiple stakeholders, as well as having periodic check-ins to ensure that appropriate actions are being taken and to determine if adjustments are needed.

⁴ One tool that can provide a starting point for this type of analysis is the National Atlas' Streamer, which can be used to trace downstream or upstream from any point on a stream or river:
<http://nationalatlas.gov/streamer/welcome.html>

To foster consistency and efficiencies across programs, state/tribal WQS programs may wish to find out how other programs such as their state's NPDES, assessment/listing, and TMDL programs may consider and protect downstream waters, and what information or direction those other programs need to effectively implement WQS—especially narrative criteria—to ensure protection of downstream waters.

- **First focus on downstream protection in priority situations.**

When considering the development of uses and criteria that ensure the attainment and maintenance of downstream WQS, states/tribes may wish to first focus their efforts on situations where downstream impacts may be greatest to make the best use of available resources. Priority situations will likely vary from state to state or tribe to tribe, and may include those in which:

- the pollutant accumulates over time in downstream waters (e.g., nitrogen or phosphorus); is persistent (i.e., resists degradation) in the environment (e.g., lead, mercury, arsenic, PCBs, dioxin); is bioaccumulative in aquatic life, wildlife, or humans (e.g., methylmercury); and/or transforms into a more toxic form downstream (e.g., some pesticide metabolites or disinfection byproducts);
- downstream waters are protected by more stringent or additional criteria;
- drinking water intakes exist downstream;
- cumulative impacts are known to occur downstream;
- environmental justice⁵ issues are relevant (e.g., human subpopulations disproportionately at risk exist downstream);
- sensitive or rare aquatic species (e.g., state- or federally-listed threatened or endangered species) and/or species with particular economic or social importance exist downstream;
- contentious cross-jurisdictional issues related to downstream water quality exist and coordination may be called for;
- waters with special use designations and/or protections exist downstream and/or upstream (e.g., headwaters, low order streams);
- downstream waters are on a state's CWA section 303(d) list of impaired and threatened waters for the relevant pollutants; and/or
- numeric criteria for the relevant pollutants have been adopted downstream.

- **Choose an approach to develop uses and criteria that ensures the attainment and maintenance of downstream WQS, and document the decision and corresponding analyses.**

Depending on the situation, it may be appropriate to pursue adoption of a narrative or numeric criterion (or a combination) for downstream protection. In many situations, a narrative downstream protection criterion that provides general coverage could be sufficient. However, in some priority situations (see above for potential examples), states/tribes may wish to consider a more tailored and specific narrative criterion and/or a numeric criterion for specific water bodies or pollutants (for more information, see response to Question 3, *What are possible criteria development approaches for ensuring the attainment and maintenance*

⁵ For more information visit the EPA's environmental justice website:
<http://www.epa.gov/compliance/ej/index.html>.

of downstream WQS?). In either case, share with the public a written summary and any related analyses of how attainment and maintenance of downstream WQS was considered during the development of upstream uses and/or criteria, including information supporting how the selected approach demonstrates that such protection is ensured. This summary should be included as supporting documentation for a state's WQS submission, in accordance with 40 CFR 131.5 and 131.6.

Similarly, in designating new or revised upstream uses (e.g., after removing a use consistent with a use attainability analysis, or UAA), the state/tribe should include information on the state's/tribe's consideration of the applicable downstream WQS. Specifically, when designating or revising upstream uses specified in CWA section 101(a)(2), or subcategories of such upstream uses, this information should include how the state's/tribe's new or revised upstream uses (and associated criteria) will continue to demonstrate protection of existing or designated uses of downstream waters. States/tribes must designate any new or revised upstream use taking into consideration the needs in the immediate water (i.e., the upstream water) as well as the WQS of the downstream waters.

However, 40 CFR 131.10(b) does not require a state/tribe to retain a use in an upstream segment that has been demonstrated through a use attainability analysis to be unattainable, solely to satisfy the requirement of 40 CFR 131.10(b). Where an upstream use is demonstrated to be unattainable because the water quality necessary to support the use cannot be achieved, then the attainable water quality and consequently the attainable use in the downstream segment may also be limited by the attainable water quality in the upstream segment, taking into consideration mitigating factors such as flow, dilution, and pollutant degradation. Where an upstream use is shown to be unattainable due to physical conditions, an attainable use may be established instead, but numeric or narrative criteria should also be established that provide for the attainment and maintenance of the (potentially more stringent) water quality standards assigned to downstream waters.

- **Consider the spatial extent of potential impacts on downstream WQS.**

Downstream impacts of upstream uses and criteria should be considered as far downstream as adverse impacts are observed or expected to occur from upstream pollution (including hydrologic flow alteration⁶). Just how far downstream a loading of pollutants (or effects from hydrologic flows) could affect the attainment and maintenance of WQS depends on a number of variables, including the nature of the pollutants (e.g., fate and transport properties), upstream and downstream flow volumes, inputs from other sources/tributaries, and the distance/travel time to downstream water bodies with additional or more stringent criteria and/or uses requiring additional protection. Network⁷ or fate-and-transport modeling can be useful for delineating the spatial extent of potential impacts. See response to Question

⁶ EPA is including impacts from hydrologic flow alteration as states/tribes are increasingly choosing to adopt criteria for the protection of hydrologic flows. Thus, particularly where a state/tribe has approved hydrologic flow criteria in their WQS, EPA considers 40 CFR 131.10(b) to apply.

⁷ A network model using the Strahler number is a simple approach (e.g., the point at which the flowing water body segment with a Strahler number n flows into another water body with a Strahler number $n+2$) that may be useful. (Strahler, A. N. (1957), "Quantitative analysis of watershed geomorphology", Transactions of the American Geophysical Union 38 (6): 913–920)

3, *What are possible criteria development approaches for ensuring the attainment and maintenance of downstream WQS?* for more information regarding numeric and narrative approaches to the development of upstream criteria that are protective of downstream waters.

- **Consider antidegradation requirements of downstream waters during development of upstream designated uses and water quality criteria.**

When developing or revising designated uses and/or water quality criteria, it is important to consider antidegradation requirements of downstream waters. Consideration of “Tier 1” requirements (i.e., protection of existing uses) in downstream waters is most pertinent when the existing use of a downstream water body is “higher” or “better” than its designated use. (For example, the designated use might be “limited aquatic life” but the existing use could be described as “full aquatic life,” a use that might require more stringent criteria.) In such cases, it is important to consider the existing use downstream, in addition to the designated uses and water quality criteria. One way that protection of existing uses can be facilitated is by ensuring that the designated use is revised to reflect any higher or better existing use.

When states/tribes located upstream are evaluating their own antidegradation requirements for high quality waters, they should also consider the attainment and maintenance of the antidegradation requirements of states/tribes located downstream. Where downstream high quality waters (“Tier 2”) and/or “Outstanding National Resource Waters” (“Tier 3”) exist, this will likely call for coordination between upstream and downstream states/tribes to ensure that high quality downstream waters are appropriately protected.

3. What are possible criteria development approaches for ensuring the attainment and maintenance of downstream WQS?

Adoption of narrative criteria or numeric criteria (or both) that are protective of downstream waters are viable options under 40 CFR 131.10(b). States/tribes have discretion in choosing their preferred approach. The EPA expects that many states/tribes will consider using a combination of narrative and numeric criteria depending on their circumstances.

In some situations, a broad narrative criterion approach may be advantageous, as such an approach is quickly and easily developed and provides basic legal coverage for a variety of water bodies and pollutants or hydrological flow alteration. Narrative criteria approaches are adaptive, allowing for protection of downstream WQS in a changing environment where loads (either pollutant concentrations or hydrologic flows or both) from different sources may change over time. States/tribes may also wish to consider a more tailored narrative criteria approach that is specific to their unique circumstances (e.g., for certain water body types or certain pollutants). A state/tribe could have several tailored narratives that, for example, include a narrative criterion for streams to protect downstream lakes or a narrative criterion that is specific to recreational criteria where the downstream jurisdiction has adopted more stringent criteria. Tailored narratives may include more details to guide implementation programs, such as including language on whether the state/tribe intends to protect downstream waters through utilizing mass balance or modeling approaches or describing the spatial extent to be covered by the provision.

The EPA's narrative downstream protection criteria templates⁸ may be used to assist states/tribes in developing either broad and/or tailored narratives. However, it is important to note that a broad narrative criterion approach (and to a lesser extent, a tailored narrative criteria approach) does not obviate the need to interpret the narrative standard quantitatively in permits or TMDLs, as such an approach does not provide the same degree of specificity regarding specific endpoints as compared to a numeric criteria approach.

Numeric criteria approaches to downstream protection are more straightforward in terms of implementation in permits, assessment of waters, and TMDLs and will likely reduce workload on these programs. However, numeric criteria tend to be more data- and analysis-intensive to develop and would thus likely impose an additional workload on state and tribal WQS programs. Also, numeric approaches may need to be developed on a specific spatial scale (e.g., ecoregional, watershed-specific, site-specific). Additionally, the EPA recognizes that it may be resource intensive for upstream states/tribes to develop numeric criteria to ensure attainment and maintenance of all downstream WQS. As stated above, states/tribes have discretion in how to address 40 CFR 131.10(b), including the option to adopt a broad narrative downstream protection criterion, possibly in combination with one or more tailored narrative and/or numeric criteria that are specific to the unique circumstances of the pollutant and/or water body.

Where feasible, states/tribes are encouraged to adopt numeric criteria to protect downstream waters for accumulative pollutants (e.g., nutrients, bioaccumulative toxics).

Although the criteria approaches described below are not exhaustive, states may consider and use one or more of the following approaches to ensure attainment and maintenance of downstream WQS⁹.

a. NARRATIVE APPROACH

- **Adoption of one or more narrative upstream criteria that are protective of downstream waters, pursuant to which assessment can be performed and control actions can be developed to ensure the attainment and maintenance of the WQS applicable to downstream waters.**

Under this approach, one or more narrative upstream criteria can be written to reflect a quality of water that ensures the attainment and maintenance of downstream WQS. Such criteria(on) should provide a strong basis for implementation via water quality management actions (e.g., in NPDES permitting, Section 401 certification, TMDL programs, and Section 305(b)/303(d) assessment/listing programs). A broad narrative criterion may be a good option for providing basic legal coverage for downstream waters, and/or for situations where states/tribes are planning to embark on development of numeric criteria for downstream protection and need coverage in the interim. Additionally, a more tailored or customized (set of) narrative criterion(a) may be useful when site-specific or site-dependent criteria are in place, or unique water bodies or special circumstances exist downstream. Again, a narrative criterion should facilitate the establishment of effluent limitations, assessment and listing of

⁸ <http://water.epa.gov/scitech/swguidance/standards/narrative.cfm>

⁹ As a reminder, regardless of the approach(es) selected by a state/tribe, the EPA notes that to be effective for CWA purposes, criteria must be adopted pursuant to state law and approved by the EPA.

impaired waters, and development of TMDLs, and ensure consideration of the antidegradation requirements of downstream waters. Therefore, states/tribes should consider customizing their narrative downstream protection criteria so that such criteria, and any associated translators or policies, include directions on the following:

- Applicable pollutant parameters, downstream water bodies, and/or conditions (e.g., hydrological, seasonal, or ecological conditions);
- A discussion of what are (or how to identify) the applicable stream segment endpoint(s) for permit writers to use in developing permit limits, or how such endpoints are determined;
- The use of water quality modeling to derive effluent limits in permits that ensure compliance with WQS in downstream waters; and
- Accounting for other pollutant sources when determining effluent limits, e.g., by 1) utilizing watershed models that can account for multiple pollutant sources, including nonpoint sources, and/or 2) retaining assimilative capacity for other sources downstream by using a limited percentage of the receiving water body flow.

States/tribes should also ensure that any mixing zone policy is not inconsistent with such narrative criteria¹⁰.

b. NUMERIC APPROACHES¹¹

Some of these numeric approaches are good candidates to pair with a broad narrative downstream protection criterion so that far-field downstream effects can be addressed more directly where appropriate.

- **Consider whether upstream uses are protective of downstream uses, and where appropriate, revise upstream uses and/or put in place numeric criteria to provide for the attainment of downstream uses.**

This approach would entail identifying sensitive downstream water bodies or water body types protected by more stringent or additional numeric WQS, and considering what upstream use and/or numeric criteria would provide for the attainment and maintenance of that downstream use. There may be situations where this approach to developing numeric criteria is not appropriate, e.g., where different natural aquatic habitats lend themselves to different use designations. Upstream criteria more stringent than the criteria downstream may need to be considered when the pollutants to which they apply are accumulative (e.g., nutrients, bioaccumulative toxics).

¹⁰ The EPA notes that it reads the phrase “In designating uses of a water body and the appropriate criteria for those uses” in 40 CFR 131.10(b) to include mixing zone provisions as such provisions are considered general policies under 40 CFR 131.13 that are reviewed by the EPA for consistency with 40 CFR 131.11, the EPA’s water quality standards implementing regulations for water quality criteria.

¹¹ The EPA notes that where numeric approaches rely on the use of models to establish a numeric downstream protection criterion, it is possible that if a TMDL is ultimately developed for such a water body using different or more complex modeling, there may be a need to reconcile or revisit the numeric downstream protection criterion for that water body based on the updated modeling to ensure that it remains consistent with 40 CFR 131.10(b).

- **Establish downstream protection values at strategic locations (e.g., according to prioritization considerations under Question 2) using water quality modeling applications.**

Watershed and water quality modeling can be used to determine numeric criteria that the EPA refers to as downstream protection values, or DPVs. DPVs are numeric water quality criteria (with magnitude, duration, and frequency), developed in tandem with upstream criteria and designated uses, which are derived to ensure attainment and maintenance of downstream WQS. States/tribes may choose to establish DPVs at strategic locations, such as the mouths of specific tributaries to estuaries, lakes or rivers, or other locations where numeric water quality criteria may be key to efficiently protecting downstream water quality through effective management decisions upstream (e.g., derivation of effluent limitations, via modeling, to prevent exceedance of the DPV).

An example of this approach can be found in the DPVs for nutrients that the EPA developed for Florida streams that protect downstream lakes from the associated effects resulting from eutrophication¹². The pour point to a more sensitive downstream water body is a natural choice for a location at which to measure water quality, and all contributions from the stream network above this point in a watershed may affect the water quality at the pour point. DPVs may also be established in upstream locations to represent sub-allocations of the total allowable loading or concentration. Such sub-allocations may be useful where there are differences in hydrological conditions and/or pollutant sources in different parts of the watershed.

- **Use water quality modeling approaches to determine what upstream criteria ensure the attainment and maintenance of the WQS in downstream waters.**

Numeric water quality criteria that are protective of downstream waters can foster clear and effective cross-program and cross-jurisdictional communication, consistency, and efficiencies. When developing upstream criteria that are protective of more sensitive or at-risk downstream waters, this option would entail first identifying one or more of the following:

- Downstream water bodies subject to more stringent or additional WQS;
- Downstream water bodies in which specific pollutants will accumulate or transform; and
- The relevant standard(s) of those waters in a downstream state, tribe, or territory.

Once downstream water bodies are identified, watershed and/or water quality modeling (using modeling applications such as WASP¹³, AQUATOX¹⁴, BASINS¹⁵ and BATHTUB¹⁶) can be performed to determine upstream criteria that will provide for the attainment and maintenance of the downstream WQS. When determining whether and how to model the

¹² U.S. EPA 2010, EPA-HQ-OW-2009_0596; FRL-9228-7, Signed Nov. 14, 2010; and 40 CFR 131.43(c)(2)(ii)

¹³ <http://www.epa.gov/athens/wwqtsc/html/wasp.html>

¹⁴ <http://water.epa.gov/scitech/datait/models/aquatox/index.cfm>

¹⁵ <http://water.epa.gov/scitech/datait/models/basins/index.cfm>

¹⁶ Walker, W. W. Jr., 1996, Simplified Procedures for Eutrophication Assessment and Prediction: User Manual," Vicksburg, MS: U.S. Army Corps of Engineer Waterways Experiment Station, Instructional Report W-96-2 (updated April 1999).

downstream levels and effects of a pollutant, some technical considerations include: the type of pollutant, chemical/physical/biological effects of the pollutant, fate and transport/in-stream processes, seasonality, sources of dilution, and synergistic or cumulative effects with other sources/tributaries.

If use of a water quality modeling application is infeasible, it can be useful to develop a simple mass balance model by mapping the streams within the watershed being considered. To help determine what upstream criteria will be protective of downstream standards, consider using field data (or data from national databases such as the EPA's Water Quality Portal¹⁷ and NPDAT¹⁸) or estimates (e.g., from NHDPlus Version 2¹⁹, Manning equation, other applicable equations, etc.) of flow volume and velocities, monitoring data on pollutant concentrations, and available information on fate and transport characteristics (e.g., decay factors or attenuation coefficients).

- **Use other approaches to develop numeric criteria that are protective of downstream uses, where data or resources are insufficient to support water quality modeling.**

If sufficient data or resources are not available, approaches that do not require water quality modeling can be used to develop criteria that are protective of downstream uses. These approaches are:

- Use the criterion of the downstream water body as the criterion applicable at the pour point of the upstream tributary into the downstream water body.
- Use regression or other statistical methods to relate downstream pollutant concentrations to upstream pollutant concentrations and determine the upstream concentration protective of the downstream WQS.
- Derive a reference condition-based criterion by using stream loads or concentrations that are spatially linked to and temporally coincident with the downstream water body during periods when that downstream water body is attaining its designated use or water quality goal (e.g., existing water quality).

An example of the third approach can be found in the Delaware River Basin Commission's (DRBC's) Special Protection Waters Program. In that program, to prevent degradation of existing water quality in the Delaware River Basin, DRBC characterized the existing water quality at 'control points' on select tributaries near their pour points to the Delaware River (called Boundary Control Points, or BCPs) and on the Delaware River itself (Interstate Control Points, or ICPs)²⁰. The BCPs represent water quality from tributary watersheds and the ICPs integrate information on the water quality of their cumulative upstream tributary drainage. This design facilitates the calculation of permit limits, via modeling, that protect receiving water quality as well as the quality of downstream sections of the Delaware River. Segmentation of the Delaware River basin into manageable, site-specific control points also aids the design of monitoring plans to evaluate the effectiveness of controls.

¹⁷ <http://www.waterqualitydata.us/>

¹⁸ <http://www2.epa.gov/nutrient-policy-data/nitrogen-and-phosphorus-pollution-data-access-tool>

¹⁹ http://www.horizon-systems.com/nhdplus/NHDPlusV2_home.php

²⁰ <http://www.state.nj.us/drbc/library/documents/LDeligibilitySPWfinal-rpt.pdf>

4. What other flexibilities, tools, and approaches are available for states/tribes to consider?

- **When protection of downstream WQS results in more stringent upstream criteria values, variances can be one mechanism for attaining protective criteria over time.** The federal WQS regulation at 40 CFR 131.13 authorizes states, at their discretion, to “include in their [s]tate standards, policies generally affecting their application and implementation, such as mixing zones, low flows and *variances*. Such policies are subject to EPA review and approval.” (emphasis added). The EPA describes a variance as a time-limited change to designated use and criteria that targets a specific pollutant(s), source(s), and water body(ies) and/or water body segment(s)²¹. Variances are different from revisions to designated uses in that variances are time-limited and intended to provide time for states, dischargers, and/or other stakeholders to implement adaptive management approaches to improve water quality and ultimately attain the designated use²².

As discussed in the response to Question 2, 40 CFR 131.10(b) does not require a state/tribe to retain a use in an upstream segment that has been demonstrated through a use attainability analysis to be unattainable, solely to satisfy the requirement of 40 CFR 131.10(b). Where an upstream use is demonstrated to be unattainable because the water quality necessary to support the use cannot be achieved, then the attainable water quality and consequently the attainable use in the downstream segment may also be limited by the attainable water quality in the upstream segment, taking into consideration mitigating factors such as flow, dilution, and pollutant degradation. Where an upstream use is shown to be unattainable due to physical conditions, an attainable use may be established instead, but numeric or narrative criteria should also be established that provide for the attainment and maintenance of the (potentially more stringent) water quality standards assigned to downstream waters.

By design, a variance reflects the highest attainable uses and associated criteria²³. The EPA recognizes that the water quality associated with the highest attainable use and criteria may still cause or contribute to an impact downstream during the time period of the variance. However, since a variance establishes a timing mechanism to ensure feasible progress is made to improve water quality towards meeting the underlying designated use and criteria, a variance is expected to only result in improving water quality over time and lessening any adverse impact to downstream water quality standards.

- **Use existing TMDLs on downstream waters to help determine what pollutant concentrations in upstream waters are expected to provide for the attainment and maintenance of downstream WQS.**

²¹ For additional information on WQS variances, also see *Discharger-Specific Variances on a Broader Scale: Developing Credible Rationales for Variances that Apply to Multiple Dischargers* (March 2013, EPA-820-F-13-012, <http://water.epa.gov/scitech/swguidance/standards/library/>) and the EPA’s *Water Quality Standards Handbook* at <http://www.epa.gov/wqshandbook> as well as the background discussion on variances in the Water Quality Standards Regulatory Clarifications Proposed Rule (78 FR 54518, September 4, 2013) at <http://www.gpo.gov/fdsys/pkg/FR-2013-09-04/pdf/2013-21140.pdf> (see pp. 54531-54536).

²² 78 FR 54531 (September 4, 2013).

²³ 78 FR 54533 (September 4, 2013).

Ideally, downstream protection should be addressed in WQS prior to a TMDL being developed. However, if an established TMDL has already identified the pollutant loading rates not to be exceeded in a particular upstream water body segment or tributary in order for a downstream water body to attain WQS, this can provide useful information when considering what uses and criteria in upstream waters will provide for the attainment and maintenance of the WQS of downstream waters. States/tribes may also develop a TMDL-like analysis for an unimpaired segment. Such analyses are not subject to EPA approval or disapproval²⁴.

- **For current WQS, it may be useful to analyze trends in water quality in order to identify situations where adjustments to uses and/or criteria of upstream waters may be necessary to prevent future impairment of downstream water bodies exhibiting adverse trends in pollutant concentrations or hydrologic flows.**

If water quality in downstream waters is trending over time towards a level of pollutants (or hydrologic flows) that may lead to exceedance of the applicable pollutant criteria in the future, this information can be used to preemptively identify pollutant sources (or sources of changes in hydrologic flows) and determine if one or more upstream criteria needs to be made more stringent to prevent impairment of the downstream water body(ies).

- **Consider stream order as a basis for protecting downstream WQS.**
Protecting and restoring headwaters and lower order streams can help maintain and/or improve downstream water quality. Water quality managers may want to consider stream order as one factor in prioritizing their resources and deciding where and when to focus their efforts.

²⁴ Clean Water Act section 303(d)(3) provides “For the specific purpose of developing information, each State shall identify all waters within its boundaries which it has not identified under paragraph 1(A) and 1(B) of this subsection and estimate for such waters the total maximum daily load with seasonal variations and margins of safety, for those pollutants which the Administrator identifies under section [304(a)(2)] as suitable for such calculation and for thermal discharges, at a level that would assure protection and propagation of a balanced indigenous population of fish, shellfish, and wildlife.”

Downstream Waters Protection

Rule

Discharges Which Result in Water Quality Standards Violation (IDAPA 58.01.02.080.01)

No pollutant shall be discharged from a single source or in combination with pollutants discharged from other sources in concentrations or in a manner that:

- a. Will or can be expected to result in violation of the water quality standards applicable to the receiving water body **or downstream waters** [emphasis added]; or*
- b. Will injure designated or existing beneficial uses; or*
- c. Is not authorized by the appropriate authorizing agency for those discharges that require authorization.*

Discussion

On the national level, the U.S. Environmental Protection Agency (EPA) has become increasingly concerned with federal regulation at 40 CFR 131.10(b) that in adopting water quality standards (WQS) states “shall take into consideration the water quality standards of downstream waters and shall ensure that its water quality standards provide for the attainment and maintenance of the water quality standards of downstream waters.” This issue was brought to the forefront as a result of the growing hypoxia problem in the Gulf of Mexico and the direct connection to inadequate nutrient criteria in upstream Mississippi drainage states. As a consequence of this national concern, EPA (Region 10) has questioned whether Idaho’s current language at 58.01.02.080.01(a) (above) meets the requirement of 40 CFR 131.10(b); the State of Idaho believes that it does.

In early 2013, EPA headquarters convened a workgroup of state and EPA personnel, following an earlier fall (2012) meeting of EPA regional water quality standards managers who identified the need to address the issue and proposed ways in which states could remedy the issue. That effort has culminated in the development of four templates which include recommended rule language changes that EPA believes states should adopt to address the subject (<http://water.epa.gov/scitech/swguidance/standards/narrative.cfm>). EPA also continues to work on a decision tool for “downstream protection” template language that they would like to see states adopt in their WQS. In addition EPA has prepared a frequently asked questions (FAQ) document which explains in greater detail the need for fixing “inadequate” WQS language and

suggestions for how to do so

(<http://water.epa.gov/scitech/swguidance/standards/library/upload/downstream-faqs.pdf>). The idea is for states to incorporate consideration of protection of downstream waters within their jurisdiction. More importantly, EPA wants consideration to be given to downstream states' WQS during the development and adoption of designated uses and criteria from upstream states.

The issue has surfaced in the context of Idaho's efforts to update its human health criteria and how the criteria will be protective of uses in the downstream states of Oregon and Washington. The implementation of this rule becomes an issue in the NPDES (and other discharge) permitting process. Several Idaho dischargers are expected to meet the more stringent criteria of these downstream states due to their close proximity to the states borders. As Idaho assumes primacy over the NPDES program it will be important to consider downstream water quality.

Considerations for the Development of Multijurisdictional TMDLs

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1 PURPOSE

Multijurisdictional Total Maximum Daily Loads (TMDLs) are generally large-scale analytical efforts that cross State and other jurisdictional borders and often encompass the entire drainage area of a major regional waterbody (e.g., Chesapeake Bay, Ohio River, Klamath River). These types of TMDLs can involve jurisdictions and waterbodies in more than one EPA Region.

Multijurisdictional TMDLs affect multiple States and/or authorized Tribes and can present a unique set of practical challenges. Such challenges include making assumptions about pollutant loadings at jurisdictional boundaries, addressing multiple and perhaps inconsistent water quality standards, determining the geographical limits for the assignment of Wasteload Allocations (WLAs), defining the expectations for incorporating reasonable assurance into the final TMDL, and coordinating TMDL schedules and implementation goals across multiple jurisdictions.

While the fundamentals for planning and completing a multijurisdictional watershed TMDL are generally the same as for any other TMDL, their development should include increased attention to, and coordination with, all affected States, Tribes, watershed associations, regulated entities, and other stakeholders. These entities (as well as EPA) should be included in significant communications and decision points so they have a thorough understanding of each others' expectations, legal requirements and limitations, priorities, and analytic and policy needs. EPA

encourages all States/Tribes within a multijurisdictional watershed to collaborate in the development of the multijurisdictional TMDL.

As appropriate and depending on the circumstances and the jurisdictions' desires, EPA should be involved in the TMDL's development, and could serve as participant, facilitator, or lead.

This memorandum is intended to provide recommendations for TMDL practitioners to consider concerning development of multijurisdictional TMDLs and is neither a regulation nor does it impose legally binding requirements on EPA or the States or authorized Tribes. As appropriate under the circumstances, the States, Tribes, and EPA have the discretion to develop TMDLs in a manner and form that might differ from the recommendations contained herein.

2 LEGAL CONSIDERATIONS

The development of a multijurisdictional TMDL is consistent with the Clean Water Act (CWA) and EPA's "generic" definition of a TMDL as stated in 40 C.F.R. 130.2(i): A TMDL is "...[t]he sum of the individual WLAs for point sources and LAs [load allocations] for nonpoint sources and natural background." A multijurisdictional TMDL simply expands the TMDL equation to a larger scale that encompasses all pollutant sources throughout the entire multijurisdictional watershed that are causing or contributing to the impairment for which the TMDL is being developed. The TMDL definition goes on to say that, "[i]f a receiving water has only one point source discharger, the TMDL is the sum of that point source WLA plus the LAs for any nonpoint sources of pollution and natural background sources, tributaries, or adjacent segments." Although specifically referring only to situations in which there is a single point source, this statement clearly intends that, when developing any TMDL, the TMDL writer should consider loadings of the pollutant of concern into the impaired segments from tributaries and adjacent segments. These boundary loads can originate within a single jurisdiction or within more than one jurisdiction.

In non-TMDL contexts, the CWA and its regulations address the need for consideration of boundary and multijurisdictional effects on water quality, as follows:

- 40 CFR 122.4(d) provides that no National Pollutant Discharge Elimination System (NPDES) permit may be issued "[w]hen the imposition of conditions cannot ensure compliance with the applicable water quality requirements of all affected States." The U.S. Supreme Court upheld EPA's interpretation of this regulation to mean that an upstream State's point source permit limits cannot cause or contribute to a violation of a downstream State's water quality standards. [*Arkansas v. Oklahoma*, 503 U.S. 91 (1992)].
- Section 319(g) of the CWA allows States to petition EPA to convene a conference between States to develop an agreement to reduce their levels of nonpoint source pollution to meet a downstream State's water quality standards. If States reach

agreement at such a conference, the States are expected to amend their nonpoint source management plans to reflect the agreement.¹

- 40 CFR131.10 (b) provides that “In designating uses of a water body and the appropriate criteria for those uses, the State shall take into consideration the water quality standards of downstream waters and shall ensure that its water quality standards provide for the attainment and maintenance of the water quality standards of downstream waters.” Under CWA section 303(c), EPA has the authority to review and approve a State’s water quality standards.
- Clean Water Act section 518 (e) provides that the Administrator shall “provide a mechanism for the resolution of any unreasonable consequences that may arise as a result of these differing water quality standards that may be set by States and Indian Tribes located on common bodies of water. Such mechanism shall provide for explicit consideration of relevant factors including, but not limited to, the effects of differing water quality permit requirements on upstream and downstream dischargers, economic impacts, and present and historical uses and quality of the waters subject to such standards. Such mechanism should provide for the avoidance of such unreasonable consequences in a manner consistent with the objective of the CWA].”

It is clear that a central goal of the CWA and EPA’s implementing regulations is to ensure that downstream States/Tribes are not subjected to pollutant loads from upstream or adjacent jurisdictions that cause or contribute to the impairment of downstream waters. This document focuses on TMDL development scenarios where downstream impaired waterbodies are impacted by an upstream or adjacent jurisdiction’s pollutant sources.

3 WATER QUALITY STANDARDS CONSIDERATIONS

As described above, section 131.10(b) directs States to ensure that their water quality standards provide for the “attainment and maintenance of the water quality standards of downstream waters.” Thus, when developing water quality standards, States are to consider the implications of their standards for downstream (and upstream) waters and eventual TMDL development. Where differences between State standards exist, those differences should be addressed when developing TMDLs for multijurisdictional waters.

A number of multijurisdictional situations involving differences in State/Tribal standards are possible. These include situations in which there are different State numeric standards, differences between narrative and numeric standards, and differences between endpoints calculated by translating narrative standards.

Specifically, there may be differences in the magnitude of the affected jurisdictions’ numeric criterion. For example, an upstream State may have a sulfate criterion of 90 mg/l, and the downstream State criterion may be 45 mg/l. In addition, there may be differences in the designated

¹ A CWA Section 319(g) Conference was held on June 22-23, 2010, in response to a petition from the Northeast States regarding mercury deposition to the Northeast from upwind States. See <http://water.epa.gov/lawsregs/lawsguidance/cwa/tmdl/mercury/319g.cfm>

uses of the two States, (e.g., the upstream jurisdiction may have designated the waterbody for aquatic life use, while the downstream jurisdiction protects it as an outstanding national resource water).

Section 303(d)(1)(C) and EPA's regulations at 130.7(c)(1) require the TMDL to be established at a level necessary to attain and maintain the applicable narrative and numeric water quality standards. EPA interprets these provisions to include protection of downstream and adjacent water quality standards. This interpretation is consistent with the requirement that permit limits in upstream States also protect downstream and adjacent State water quality standards. This is usually accomplished by developing the TMDL to protect the most stringent standard. Additionally, if one jurisdiction has a narrative criterion and the other has a numeric criterion, TMDL developers should make sure the TMDL target protects both uses.

Moreover, jurisdictions that share a waterbody or watershed can make the Section 303(d)-listing and TMDL development processes more effective by cooperating to develop consistent water quality standards for those shared waterbodies. This will make impaired waterbody identifications and TMDLs more effective tools for protecting water quality.

4 ALLOCATION ANALYSIS CONSIDERATIONS

As with the development of any TMDL (e.g., single segment, one State watershed, multijurisdictional watershed), the allocation process distributes or assigns pollutant loads to entities or sources, such that the sum of the loads does not exceed the maximum allowable load to the waterbody or waterbodies for which the TMDL is being developed. Allocations are a required component of a TMDL and are composed of WLAs and LAs. WLAs are portions of the TMDL assigned to existing and future point sources, and LAs are portions of the TMDL assigned to existing and future nonpoint sources, including background loads. The sum of the WLA, LA, and the margin of safety (MOS) equals the loading capacity of the receiving waterbody. In defining Total Maximum Daily Load, 40 CFR 130.2 (i) "states that the TMDL is the sum of the point sources and the nonpoint sources of pollution and natural background sources, tributaries, or adjacent segments." TMDL practitioners should consider in their analyses all sources of the pollutant causing or contributing to the impairment of the waters for which the TMDL is being developed, independent of jurisdictional boundaries. The TMDL analysis should ensure that the pollutant loadings are set at levels necessary to attain and maintain all applicable water quality standards in all of the jurisdictions included in the TMDL analysis.

Generally, the goal of the allocation process is the same for multijurisdictional TMDLs as for single jurisdictional TMDLs: assure that the proposed loading capacity and the allocations to point sources, nonpoint sources, background sources, and MOS will attain and maintain all applicable water quality standards for the targeted waterbody. While the "bottom line" objective of all TMDLs is the same, there are special considerations associated with developing allocations for multijurisdictional TMDLs where the watershed extends beyond one State. Such considerations include a determination of the appropriate scope and scale of the TMDL, an analysis of appropriate geographical limits on the assignment of WLAs, the equitability and feasibility of the various WLAs, and assumptions about pollutant loadings at jurisdictional boundaries. Regardless of how the allocations are established within the multijurisdictional TMDL, they should be consistent with

current TMDL regulations and policies, including their expression as a load or “other appropriate measure.” Allocations should be expressed in terms of a “daily” load even if also expressed in non-daily terms.

4.1 Defining the Scope of the Multijurisdictional Watershed

Developing TMDLs on a multijurisdictional watershed scale should begin with the delineation of an appropriate drainage area that encompasses any potential pollutant source that could cause or contribute to the target waterbody(s) impairments. In many cases, the entire drainage area potentially impacting the target waterbody(s) will be included in the TMDL analysis. For especially large drainage areas, there may be a need to evaluate whether certain sub-basins should be excluded from the allocation analysis due, perhaps, to physical boundaries that separate them from the target waterbody. Additionally, there may be sub-basins where the existing pollutant load will be treated as a background load in the target waterbody’s TMDL analysis.

Once the appropriate watershed area containing the potential pollutant sources is delineated, the States and stakeholders should identify all impaired waterbodies within the delineated watershed, determine the applicable water quality standards in each jurisdiction, determine the appropriate TMDL target, and conduct a source assessment of both point and nonpoint sources that have a potential to cause or contribute to the target waterbody’s impairment(s).

4.2 Scale or Resolution of Source Allocations

The scale at which a TMDL analysis considers pollutant loading from a variety of sources can affect the specificity with which allocations are identified. The spatial scale of a loading analysis can range from an entire watershed to certain delineated subwatersheds. A multijurisdictional approach allows for the broadest possible spatial evaluation of sources and their impacts, all of which should, as appropriate, be captured in the allocations. Establishing allocations at a more source-specific scale will likely be more informative and effective at the implementation stage, even if this specificity is limited to the jurisdiction developing the TMDL. Where there is sufficient cooperation between jurisdictions to make it possible, providing WLAs and LAs in each of the basins’ subwatersheds can be very beneficial. Cooperation and collaboration between all involved jurisdictions is encouraged in order to foster partnerships and dialogue that increases the likelihood that allocations will be equitable, achievable, and more quickly implemented.

The allocation analysis should establish pollutant loads and reductions at a scale and level of specificity that maximizes the TMDL’s usefulness as a planning tool, especially when addressing multiple impaired segments and multiple pollutants. Evaluating the upstream-to-downstream effects of pollutant loading is a primary benefit of developing TMDLs on a watershed scale, particularly when using a watershed model. For a more thorough discussion of watershed scale TMDLs refer to the Draft Handbook for Developing Watershed TMDLs at http://www.epa.gov/owow/tmdl/pdf/draft_handbook.pdf. Such an analysis is most effectively accomplished when the affected parties collaborate on conducting the pollutant source assessment and assessing the near field and far field water quality impacts.

4.3 Development of Wasteload Allocations

As discussed in the previous section, a more effective TMDL can be established when allocations to all sources are made at an appropriate scale and level of specificity.

In some multijurisdictional TMDLs, downstream States have included assumptions about upstream and/or adjacent State loadings in the modeling analysis in order to evaluate a range of potential boundary loading scenarios. By considering a range of hypothetical loading reductions from upstream or adjacent point source facilities, in conjunction with modeled nonpoint source reductions, the downstream jurisdiction can develop a range of boundary assumptions that will assist in developing its own WLAs and LAs necessary to meet applicable water quality standards.

EPA believes that a highly informative and effective multijurisdictional TMDL can be produced when it is developed in a collaborative manner by all impacted States and/or Tribes. For example, the modeling analyses might indicate that the upstream or adjacent jurisdictions contain point sources that cause and/or contribute to violations of the downstream State's water quality standards. This information, if confirmed and accepted by the upstream or adjacent State, can then be translated collaboratively into WLAs in the multijurisdictional TMDL. Such watershed wide allocations can help inform the upstream State's permit writers when they revise their water quality based effluent limit (WQBELs) within the next permit cycle. By working with the downstream or adjacent State, the upstream State can also ensure that their point sources are accurately characterized, and equity issues can be discussed before the TMDL is finalized. Such multijurisdictional collaboration is more likely to result in allocations agreeable to all jurisdictions and eliminate the possibility they will develop individual and potentially inconsistent TMDLs.

Where EPA is establishing a multijurisdictional TMDL, EPA can work with all affected jurisdictions to coordinate development of WLAs throughout the entire watershed.

4.4 Priority and Feasibility of Source Allocations

Another consideration for the development of effective allocations is the relative feasibility of potential allocations scenarios. Whether or not the TMDL is developed on a multijurisdictional watershed basis, the TMDL analysis typically involves multiple sources. When establishing allocations among various sources, the issues of equitability and feasibility often arise. As with any TMDL, the allocation analysis can be used to evaluate a variety of possible allocation schemes to prioritize source reductions. For example, a goal might be to strike a balance among allocations and distribute necessary load reductions equally among sources. Alternatively, the allocations might target those sources that represent the majority of the load input or those that are more feasible to reduce, technically or economically. For example, some sources that already contribute a small portion of the overall load might not be able to reduce the load any further. Other sources that represent a larger percentage of the total load and have a greater opportunity for reductions (e.g., more land area and delivery pathways to apply BMPs) might be targeted with larger reductions.

4.5 Boundary Loads

One of the most important and challenging issues in the development of multijurisdictional TMDLs is how to consider the boundary pollutant loads from upstream, downstream, and adjacent States. The selected approach can have significant consequences for the assignment of pollutant reduction responsibilities, both for sources within the jurisdiction developing the TMDL as well as for sources in neighboring jurisdictions.

The most informative and comprehensive approach would be to conduct the modeling and analysis at the watershed scale, incorporating loads from all contributing jurisdictions. Under this approach, all of the upstream and adjacent States would participate in the modeling and analysis that assesses

pollutant loadings, pollutant transport, and water quality responses throughout the entire watershed. These analyses would assign individual WLAs to all point sources in the watershed that cause or contribute to the water quality impairments. The nonpoint source loads could be characterized by subwatershed and source type to the extent data is available to delineate such sources. This approach is possible if the jurisdictions work cooperatively and agree to take advantage of the wide scale analyses in targeting point and nonpoint source controls. Where this is not possible, the pollutant loads at State boundaries can be analyzed using various loading assumptions.

In selecting an analytical approach, one thing to consider is the difference between upstream-downstream boundaries and adjacent boundaries. Boundary loads that flow in one direction can be determined by measuring flow and chemical concentrations; however adjacent loads are generally mixed in the waterbody and are difficult to be measured. Adjacent loads are the loads contributed by adjacent States where the boundary line is within the waterbody. Since the water is mixed, there may be no clear way to measure the load from each jurisdiction. Therefore, distinguishing loadings from adjacent jurisdictions usually necessitates the use of mechanistic models that contain some capability of tracing advective and diffusive mixing of pollutant loads.

Four typical scenarios for considering boundary loadings in developing multijurisdictional TMDLs are presented in the remainder of this section. The first two scenarios address TMDL development by the downstream State and whether or not the boundary load from the upstream state causes or contributes to the impairment downstream. The last two scenarios address the development of TMDLs by the upstream or adjacent State and whether or not their boundary load causes or contributes to an impairment in the neighboring jurisdiction(s). The hypothetical multijurisdictional watershed provided in Figure 1 is referred to in the text below to further illustrate and distinguish the four scenarios.

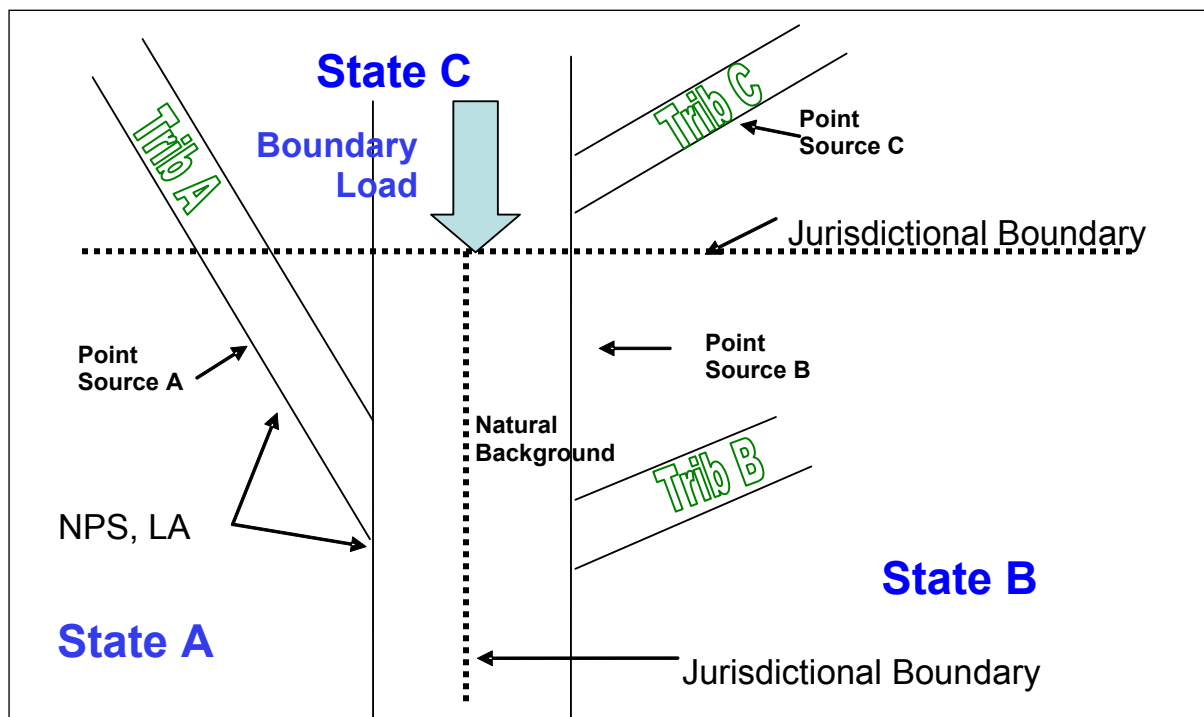


Figure 1: Hypothetical multijurisdictional watershed (State A–downstream State; State B–adjacent State; State C–upstream State).

The Downstream State is developing the TMDL

Some insight on this situation can be obtained by reviewing the language contained within the definition of a Total Maximum Daily load (TMDL) in 40 CFR Section 130.2 (i), where it is stated that:

“If a receiving water has only one point source discharger, the TMDL is the sum of that point source WLA plus the LAs for any nonpoint sources of pollution and natural background sources, tributaries, or adjacent segments.”

$$\text{TMDL} = \text{WLA}_A + \sum \text{LA} (\text{NPS} + \text{NBG} + \text{Trib}_A + \text{ASL}_B + \text{BL}_C)$$

Where the allocations are defined as:

WLA_A = Point source load in State A

LA = Load Allocation for non-point and other sources

NPS = Nonpoint source load in State A

NBG = Natural background load

Trib_A = Tributary load from State A

ASL_B = Adjacent Segment load from State B

BL_C = Boundary (Upstream Segment) load from State C

This TMDL definition gives the TMDL developer flexibility in defining the geographical extent and the level of specificity when making allocations. Generally, specific pollutant allocations would be made to the point source A (a downstream State), and nonpoint sources (LA_A). In addition, the TMDL writer could assign gross LAs to natural background sources, the loadings of the pollutant of concern from Trib_A, and loadings from the adjacent segments ($\text{ASL}_B + \text{BL}_C$) in States B and C.

During TMDL development, it is important that State A provides information about the assumptions it is using in calculating the Boundary Load (BL) and to the Adjacent Segment Load (ASL). These boundary loading assumptions will greatly influence both the WLA_A and LA decisions applicable to State A.

Scenario 1: The upstream boundary load from State C does not cause or contribute to State A's downstream impairment.

In this scenario, we recommend using the existing gross load from State C as a boundary condition for incoming loads to State A. Additionally, there is no expectation that the upstream or adjacent States will reduce their existing contributions. For modeling purposes, existing loads are the simplest boundary condition to use, and in this case, State C's current loads are not impairing any of the downstream jurisdiction's waters.

Generally, in this scenario, State A's TMDL has no information that assures that the upstream and/or adjacent boundary loads will remain at the same levels. Therefore, if loads from State C increase, loading capacity for State A will decrease if the cumulative pollutant load causes State A's water quality standards not to be met. This lack of certainty should be considered when making LA, WLA, and margin of safety decisions in State A.

Scenario 2: The boundary load from State C causes and/or contributes to the impairment in State A.

In the TMDL analysis, it may be assumed that upstream/adjacent States will implement reductions no more significant than to meet State A water quality standards both at the boundary and downstream of the boundary.

- Assuming upstream jurisdiction permits are written to meet downstream or adjacent State standards [*Arkansas v. Oklahoma*, 503 U.S. 91 (1992)], it may be reasonable for State A to assume that the upstream/adjacent States would deliver pollutant loads to State A that meet State A water quality standards. Any lack of certainty in documenting how boundary or adjacent load reductions will be achieved in States B and C should be considered when making LA and WLA decisions in State A. Ideally, multiple jurisdictions would collaborate on developing the TMDL, and the scope of the TMDL would include the upstream jurisdiction. In this case, State A would compute the boundary load necessary to assure that standards are being met in both the near field and far field. These boundary load calculations would be shared with States B and C. Using this information, and possibly supported by the modeling and analysis undertaken by State A, States B and C would provide documentation that would describe how they would implement point and non-point source controls that result in loads at the shared boundary that meet State A's standards.
- If the TMDL does not include sufficient documentation that State C can reduce their boundary load to meet State A's water quality standards, there may be less loading capacity for State A. Depending on the level of uncertainty for reducing loading in State C, it may be necessary for State A to further reduce its own pollutant sources.

Note that for some scenarios, a lack of collaboration could prompt a request for a CWA Section 319(g) conference request with EPA and the upstream or adjacent State/Tribe. Section 319(g) allows States to petition EPA to convene an interstate management conference if a state is not meeting water quality standards in whole or in part as a result of nonpoint source pollution from another state. There has been limited use of this provision, but with growing attention on nutrient TMDLs, this provision could be one means for bringing all parties to the table to resolve interstate questions about how to achieve nonpoint and point source load reductions necessary to achieve water quality standards.

The Upstream Jurisdiction or Adjacent Jurisdiction is developing the TMDL

In some cases, the TMDL in a multijurisdictional watershed is developed by either the upstream State/Tribe (State C) or the adjacent State/Tribe (State B). As these jurisdictions proceed with their TMDLs, they too must make certain assumptions regarding the boundary loads at the downstream or adjacent State (State A). A discussion of these boundary assumptions is presented below.

Scenario 3: The upstream or adjacent State/Tribe's pollutant load at the boundary does not cause or contribute to near field or far field impairment of any other jurisdiction's waters.

As States B or C develop their TMDL, the TMDL should consider the impact of loads on the downstream jurisdiction, particularly if downstream State water quality is already impaired. WLAs and LAs in the TMDL should be set at a level that will neither cause nor contribute to any impairment in the downstream State(s). In this circumstance the upstream or adjacent State with the impaired water may be able to develop the TMDL with little collaboration from the other States. However, it is recommended that all States sharing the water collaborate to determine feasible and equitable allocations where there are any questions regarding the effect of pollutant loads.

Scenario 4: The upstream (e.g., State C) or adjacent State's (e.g., State b) pollutant load at the boundary causes or contributes to near field or far field impairment of another State's (e.g., State A) waters. There is potential for a significant issue to emerge as the upstream or adjacent State develops allocations to meet their own standards and those of the downstream State. If there is an impairment in the shared water in the downstream State, and loadings from both the upstream or adjacent State and the downstream State are causing and contributing to the impairment, the TMDL should consider the needed loading reductions in the downstream State. One approach would be to extend the modeling and analysis far enough into the downstream State to determine the reductions necessary to meet standards in the downstream State by both point and non point sources. This approach could be complex. However, this effort could be shared if the affected States work together.

A second approach would be to estimate a gross total loading by the downstream State that, in combination with the proposed TMDL boundary load(s), results in the attainment of standards in the downstream State. Permits for point sources in upstream jurisdictions must contain WQBELs that do not cause and contribute to the impairment of a downstream jurisdiction's waters. Therefore, even if the upstream State develops a TMDL for an impaired water within its jurisdiction, it is important for all States sharing this water to participate in the TMDL process to ensure allocations that are appropriate, equitable, and implementable.

5 REASONABLE ASSURANCE CONSIDERATIONS

Consistent with existing EPA guidance, TMDLs that allocate pollutant loadings to both point sources and nonpoint sources, whether single-segment or a multijurisdictional watershed, should include reasonable assurance that nonpoint source control measures will achieve expected load reductions. Clearly, a downstream State/Tribe should provide documentation that the allocations to point sources in the watershed within its boundaries have been based on an assessment of the probability that proposed nonpoint source allocations will be achieved. A major challenge in developing the multijurisdictional TMDL is how to consider reasonable assurance for the sources originating in the upstream or adjacent jurisdiction. This issue places a premium on effective collaboration between jurisdictions.

NPDES permitted point sources are required by regulation not to cause or contribute to any downstream WQS violations [40 CFR 122.4(d)]. If expected nonpoint source pollution reductions cannot be assured to occur in a reasonable time, then point sources upstream and downstream may be required to meet more stringent limits. This possibility might motivate local efforts to reduce pollutant loads from nonpoint sources.

6 SUMMARY CONSIDERATIONS FOR DEVELOPING MULTIJURISDICTIONAL TMDLS

While many aspects of planning and completing a multijurisdictional watershed TMDL are similar to other TMDLs, the approaches described in this memo may require States to give special consideration to certain technical and policy challenges. In particular, States/Tribes that follow this

process for developing multijurisdictional TMDLs should give increased attention to, and coordinate with, a diverse array of stakeholders. It may be appropriate for EPA to be involved either as a participant, in the role of facilitator, or as the lead in developing a TMDL depending on the circumstances and the States' desire. While a number of approaches to the development of multijurisdictional TMDLs may prove successful, EPA encourages States/Tribes to make use of the following successful strategies:

- **Coordinating TMDL schedules and implementation goals across multiple jurisdictions.** There are opportunities to initiate cooperative approaches to the development of technically sound and equitable multijurisdictional TMDLs during the development and submission of the biennial CWA Section 303(d) impaired/threatened waters list to EPA. For those impaired waters whose watershed goes beyond a single jurisdiction, States may want to coordinate their prioritization and scheduling of TMDL development in order to facilitate a multijurisdictional process.
- **Determining the spatial extent of the watershed modeling approach.** Multijurisdictional TMDLs are most effectively developed and implemented when they reflect the collective goals and objectives of all of the jurisdictions that are linked hydrologically within the watershed addressed by the TMDL. Therefore, whenever possible, a watershed-wide modeling analysis should be conducted to assess pollutant loadings from all point and nonpoint sources in all jurisdictions throughout the watershed. This holistic analytical approach will have the highest probability of producing equitable and implementable allocations to all point sources (WLAs) and non-point sources (LAs).
- **Determining the geographical limits for the development of individual WLAs and LAs.** Allocating facility specific WLAs and sector-specific LAs throughout the watershed is the preferred approach for the development of multijurisdictional TMDLs. This watershed-wide approach will help assure the attainment of water quality standards and will help inform the issuance of enforceable NPDES permits for all dischargers throughout entire watershed. At a minimum, this comprehensive approach will result in the development of informational WLAs and LAs for consideration during future TMDL development and NPDES permitting actions by any States not formally participating in the development of a multijurisdictional TMDL.
- **Consideration of pollutant loadings at jurisdictional boundaries.** Regardless of which jurisdiction is developing the TMDL, and independent of the spatial scale of the TMDL analysis, the boundary loading assumptions should be established at levels that do not cause or contribute to the impairment of water quality standards at that boundary or anywhere downstream of the boundary.

The most informative approach for considering boundary loads is to conduct the modeling and analysis at the watershed scale, incorporating loads from all contributing jurisdictions. Under this approach, all of the upstream and adjacent States participate in the modeling and analysis that assesses pollutant loadings, pollutant transport, and water quality responses throughout the entire watershed.
- **Targeting multiple water quality standards.** For multijurisdictional waterbodies where both jurisdictions have narrative criteria or differing uses, States/Tribes should jointly develop the TMDL target to protect the most sensitive use. Similarly, where numeric criteria

differ, the TMDL should be developed to meet the most stringent criteria. Also all jurisdictions should communicate to ensure consistency in listing, TMDL development, and permitting to reduce the potential for inconsistency. Where necessary, EPA may serve the role of facilitator in resolving differences between States/Tribes. Where it is not possible to resolve differences in developing the TMDL, or to develop consistent standards in the short term, at the request of the jurisdictions it may be appropriate for EPA to serve as the lead in developing the TMDL.

- **Defining the expectations for incorporating reasonable assurance.** All TMDLs considering pollutant loadings from both point sources and nonpoint sources, including multijurisdictional TMDLs, should include reasonable assurances that nonpoint source control measures will achieve expected load reductions. The State/Tribe developing the TMDL, whether the upstream or downstream State, should provide documentation that the allocations (WLAs) to point sources in the watershed within their boundaries have been determined based on an assessment of the probability that proposed nonpoint source allocations (LA) will be achieved. While there are a number of options for the downstream State/Tribe for considering how reasonable assurance can be provided so that boundary loads will be achieved, the watershed TMDL framework typically provides the greatest information in targeting nonpoint source controls and in facilitating identification of feasible allocation options for both point and nonpoint sources.



Monday, Sept. 23, 2013

Media contact: Susan Wickstrom, 971-673-0892, susan.d.wickstrom@state.or.us

Limit consumption of some fish species near Bonneville Dam, mid-Columbia River

Salmon, steelhead, American shad not affected by advisories extending to McNary Dam

Fish are an important part of a healthy diet, especially migratory fish like salmon. However Oregon and Washington health officials are issuing fish consumption advisories on certain species from two sections of the Columbia River due to elevated levels of mercury and polychlorinated biphenyls (PCBs) found in fish tissue.

Together, the two advisories, jointly issued today by the Oregon Health Authority (OHA) and the Washington Department of Health (WA Health), extend from Bonneville Dam (where mercury and PCB levels are highest) 150 miles upstream to McNary Dam.

Public health officials do not know how long the advisories will last.

The issue is that mercury and PCBs can build up in resident fish (that live in one place their entire life), such as bass, bluegill, yellow perch, crappie, walleye, carp, catfish, suckers and sturgeon that stay in the area and are exposed over their lifecycles. If a person eats too much contaminated fish, there can be negative health effects over time such as damage to organs, the nervous system and reproductive system.

The advisories do not affect migratory (traveling) fish species such as salmon, steelhead, American shad and lamprey, which should remain part of a healthy diet.

The advisories are as follows:

- Bonneville Dam – OHA and WA Health recommend no consumption of any resident fish species, from Bonneville Dam to Ruckel Creek, one mile upstream from Bonneville Dam.
- Middle Columbia River – OHA and WA Health recommend eating no more than one meal per week – four meals per month – of any resident fish species taken from

the river between Ruckel Creek and McNary Dam, a roughly 150-mile stretch of the river.

A meal is about the size and thickness of your hand.

Unborn fetuses, nursing babies and small children are most vulnerable to the health effects of PCBs and mercury, so it is especially important that pregnant and nursing women follow this advice. Fetuses and babies exposed to high levels of mercury and PCBs can suffer life-long learning and behavior problems. The state health agencies recommend all women of childbearing age (18 to 45) follow fish advisories. Anglers also should not give resident fish caught from the middle Columbia River to others unless the recipients are aware of where the fish were caught, and that they understand the current fish advisories' recommendations.

Washington State already has a statewide fish advisory that warns women of childbearing age to not eat Northern Pikeminnow (which are found in the Columbia River) due to elevated levels of mercury.

By issuing the advisory, health officials hope to increase the public's awareness of fish species to be avoided, and those to keep eating. While it is important for people to know about contaminants in fish, it is equally important to keep fish on the table. Health officials from both states continue to encourage people to eat a variety of fish as part of a healthy diet, including pregnant women. Migratory fish such as salmon and steelhead are an essential source of protein, omega-3 fatty acids and other nutrients, and are low in contaminants.

"Our iconic salmon, steelhead and other migratory fish are fine," says Jae Douglas, Ph.D., administrator for OHA's Public Health Center for Prevention and Health Promotion.















"People still need to eat at least two meals of fish per week. We just want people to pay attention to these advisories and only eat migratory fish from these stretches of the river."

To learn more online about why fish is good for you and get information about fish consumption advisories in Oregon, visit www.healthoregon.org/fishadv. For information about Washington's fish consumption advisories, visit <http://www.doh.wa.gov/fish>.

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NOTICE!

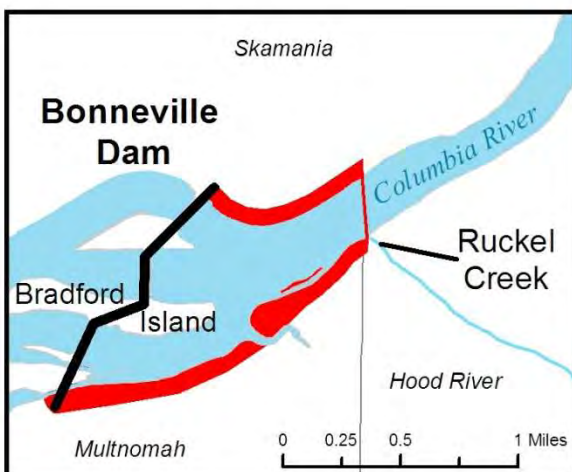
BONNEVILLE DAM FISH ADVISORY AT BRADFORD ISLAND

DO NOT EAT		HEALTHY TO EAT	
Carp		Salmon	
Bluegill		Steelhead	
Sucker		American Shad	
Small mouth bass		Lamprey	
Large mouth bass		Fish Illustrations Credit: USFWS, Sturgeon: Joseph R. Tomelleri	
Sturgeon			
Yellow Perch			
Crappie			
Walleye			
Catfish			

When fishing between Bradford Island and Ruckel Creek eat only salmon, steelhead, shad & lamprey. Due to chemical contamination, all other fish living in this area are not safe to eat.



It is especially important for babies, children, women who are pregnant, plan to become pregnant and/or are nursing to follow this advisory. Health effects of eating contaminated fish can include lifelong learning problems and cancer.



For more information, call: 1-877-290-6767 or visit:

www.healthoregon.org/fishadv



Fish Consumption Advisory

Mid-Columbia River

Fact Sheet September 2013

Background

In 2008 and 2009, the Oregon Department of Environmental Quality (DEQ) collected smallmouth bass and largescale sucker fish tissue samples throughout a 150 mile section of the Columbia river. This section stretches from Ruckel Creek (the border between the Oregon counties of Multnomah and Hood River) upstream to the McNary Dam in Umatilla County.

The Oregon Health Authority (OHA) examined the fish tissue data to determine if eating fish from this area posed risks to human health.

OHA looked at a variety of chemical contaminants and found two of human health concern in resident fish: mercury and PCBs.

Mid-Columbia River Fish Consumption Advisory

Due to moderate levels of mercury and PCBs, Oregon and Washington health officials recommend limiting the amount of resident fish species consumed from the mid-Columbia River. Resident fish stay within a defined territory on the river and do not migrate out to the ocean.

Women who are or might become pregnant, nursing mothers, and young children are most at-risk for health effects from mercury and PCBs and should follow all of this advisory.

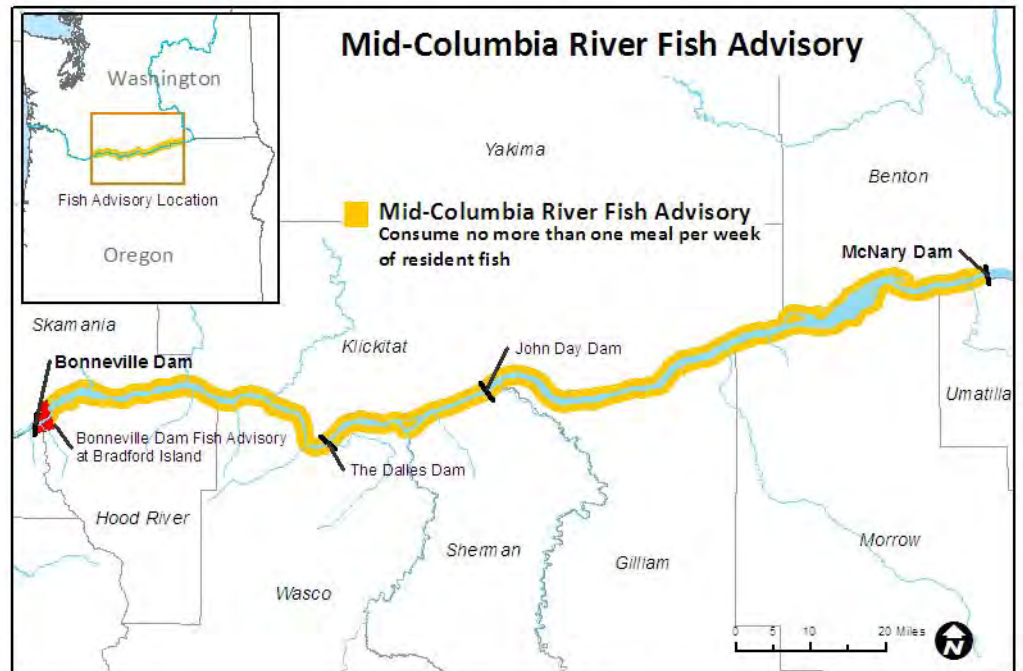
Resident Fish: Limit resident fish from Ruckel Creek to McNary Dam to no more than one meal per week -no other fish should be eaten that week.

Migratory Fish: Salmon, steelhead, lamprey, and shad are NOT included in this fish advisory. They are a healthy choice from the Columbia River.

See the back of this fact sheet for complete advisory information.

Eat Fish, Be Smart, Choose Wisely

The American Heart Association recommends eating fish at least two times a week as part of a healthy diet.



To get the health benefits of eating fish, make smart choices and choose fish low in chemical contaminants.

Removing fish from your diet won't eliminate your overall exposure to contaminants. Other foods have chemical contaminants in them, too, but mercury and PCBs are mainly found in fish.

Contaminants of Concern

Mercury is an element found in rocks and soil. It can also be released into the environment from industrial air pollution and mining operations, and through improper disposal of products that contain mercury such as transformers, thermostats, electrical switches, and fluorescent bulbs.

Mercury Health Impacts Mercury can harm the central nervous (brain) and immune systems. If a baby or fetus is exposed to high levels of mercury the child may develop lifelong learning and behavioral problems. A fetus or child is more sensitive to mercury than an adult. If a person is exposed to mercury over time it can harm organs, including the kidneys and heart.

PCBs are a man-made group of chemicals once used in coolants and lubricants for transformers and in plastics. In 1977, PCBs were banned because they stay in the

environment for a long time and can harm human and environmental health.

PCBs Health Impacts PCBs consumed at high levels can impact men and women of all ages. PCBs may cause a variety of health problems depending on the amount a person is exposed to. If a baby or fetus is exposed to high levels of PCBs while developing, the child may have lifelong learning and behavioral problems. PCBs may also affect the immune and reproductive systems and thyroid hormones. PCBs may cause cancer in people.

How do mercury and PCBs get into Columbia River fish?

Mercury and PCBs enter rivers, lakes, and streams through rain or snow and are also directly released from industrial or natural sources. Once mercury and PCBs get into the water, they settle into the sediment. Bacteria in the sediment convert mercury into methylmercury, a more toxic form.

When fish eat smaller organisms these contaminants build up in the fish's muscle (fillet) and fat, and are added to any contaminants that were already there. The bigger and older a fish is, the more likely it is to have eaten lots of smaller, contaminated fish. People are exposed to mercury and PCBs when they eat fish.

Mid-Columbia River Fish Consumption Advisory

Fish are nutritious, but resident fish from the mid-Columbia River contain chemicals (mercury and PCBs) that may harm your health depending on how much you eat. **Everyone should follow this advisory, especially women who are or might become pregnant, nursing mothers, and young children. Babies and children are most at-risk.**

Health Benefits of Fish

The American Heart Association recommends eating fish at least two times per week as part of a healthy diet.

Fish is nutritious.

Fish is low in saturated fat and a good source of protein, vitamins, minerals, and omega-3 fatty acids.

Fish is good for your heart.

Omega-3s found in fish help prevent heart disease and stroke by reducing blood pressure, inflammation, and blood clotting.

Fish is brain food.

Omega-3s may help relieve depression and may decrease the risk of Alzheimer's disease.

Omega-3s during pregnancy may help with the healthy development of a child's brain, retina, and nerve tissue.

To get the health benefits found in fish choose fish low in contaminants.

Preparing Fish the Healthy Way



Serving/M meal

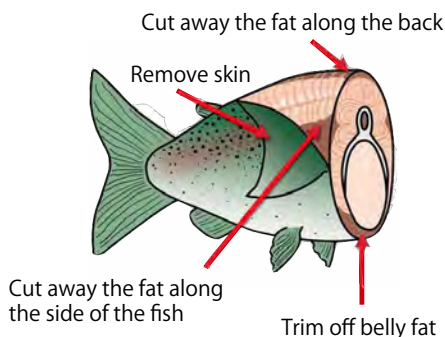
1 oz. for every 20 lbs. of body weight.

160 lb. Adult = 8 oz. (uncooked fish)

Fish are part of a healthy diet. You can make it even healthier if you follow these tips. Some chemicals, like PCBs build up in the fat of fish and can be reduced when you prepare fish correctly:

- When cleaning fish, remove the skin, fat, and internal organs before cooking.
- Grill, bake, or broil fish so that the fat drips off while cooking.
- Eat younger and smaller fish (within legal limits).

Mercury can't be reduced by cleaning or cooking because it builds up in fish muscle (the fillet).



HEALTHY CHOICE

Salmon



Steelhead



Lamprey



Shad



Enjoy these fish

Salmon, steelhead, lamprey, and shad are low in contaminants.

LIMIT

OR

Meals Per Week

Bass



Bluegill



Carp



Catfish



Crappie



Sucker



Sturgeon



Walleye



Yellow Perch



Eat only 1 meal per week of any combination of these species: bass, bluegill, carp, catfish, crappie, sucker, sturgeon, walleye, or yellow perch.

If you eat the recommended amount no other fish should be eaten that week.

DO NOT EAT

Northern
Pikeminnow



DO NOT EAT

For More Information:

Oregon Health Authority
Toll Free: 1-877-290-6767
www.healthoregon.org/fishadv

Washington Department of Health
Fish Advisories Program
Toll Free: 1-877-485-7316
www.doh.wa.gov/fish

Oregon
Health
Authority

Washington State Department of
Health

Fish Illustrations Credit: USFWS, Sturgeon Joseph R. Tomelleri



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

April 18, 2014

OFFICE OF
WATER

Re: Notification of Consultation and Coordination on Potential Reinterpretation of Clean Water Act TAS Provisions

Dear Honorable Leader:

The U.S. Environmental Protection Agency (EPA) is initiating consultation and coordination with federally-recognized Indian tribes concerning a potential reinterpretation of Clean Water Act provisions regarding treatment of tribes in the same manner as a state (TAS). The reinterpretation could reduce some of the time and effort for tribes submitting applications for TAS for regulatory programs under the Clean Water Act. Specifically, EPA is considering reinterpreting section 518(e) as a delegation by Congress of authority to eligible tribes to administer Clean Water Act regulatory programs over their entire reservations. This reinterpretation would replace EPA's current interpretation that applicant tribes need to demonstrate their inherent regulatory authority. All other tribal eligibility requirements established in the Act and EPA's regulations would remain in place.

You may be interested in this rulemaking if:

- your tribe has submitted – or is considering submitting – an application for TAS for the purpose of administering a CWA regulatory program, *or*
- your tribe is one of the 48 tribes that are already approved for TAS to administer the water quality standards program, and might seek TAS for other CWA regulatory programs in the future, *or*
- you have a general interest in tribal administration of Clean Water Act regulatory programs.

The consultation and coordination process will be conducted in accordance with the *EPA Policy on Consultation and Coordination with Indian Tribes* (www.epa.gov/tribal/consultation/consult-policy.htm). EPA invites you and your designated consultation representative(s) to participate in this process. The current phase of this process will extend from the date of this letter until June 20, 2014. If we decide to proceed with the reinterpretation, we expect to offer a second phase later this year after the reinterpretation is proposed in the Federal Register.

The EPA will hold two identical consultation and coordination webinars concerning this matter, as listed below. Each webinar will consist of two parts. The first part will provide tribes an opportunity to learn more and ask questions about the proposed reinterpretation. The last part of the webinar will be reserved for consultation comments from tribal leaders or their consultation designees.

Tribes-only Consultation and Coordination Webinars: "Potential Reinterpretation of Clean Water Act TAS Provisions"

- Thursday, May 22, 2:00 – 4:00 pm EDT
- Wednesday, May 28, 1:00 – 3:00 pm EDT

The webinars will be held using Adobe Connect. To register for the webinar, please visit: <http://www.horsleywitten.com/TribalConsultation>, or to register by phone, please call: Erin Cabral at 508-833-6600. You will receive an email confirmation after your registration has been submitted. Following registration and within one week of the webinar, you will receive an email with information for accessing the webinar on the day of the event. An archived copy of the Webinar presentation and an audio recording of the webinar will be posted at: http://water.epa.gov/scitech/swguidance/standards/wqslibrary/tribes_index.cfm within 2 weeks after the Webinar. EPA also extends an invitation for tribes to request formal government-to-government consultation during the consultation and coordination period.

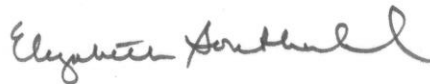
Enclosed is the consultation and coordination plan that includes a description of the matter under consultation and the process EPA intends to follow, including dates of key events and information on how you can provide input on this matter. *This information is also available on EPA's Tribal Portal* <http://www.epa.gov/tribal/consultation>

The official EPA contact person for this consultation and coordination process is Beth Leamond, Office of Water, (202) 566-0444, Leamond.Beth@epa.gov. Please do not hesitate to contact her should you have any questions or if you would like to request alternate arrangements to the process outlined in the consultation plan.

Whether or not you participate in this consultation process, you would also have the opportunity to provide input on the reinterpretation during the public comment period if EPA decides to move forward with this matter. In that event, the proposed reinterpretation of Clean Water Act TAS provisions would be published in the *Federal Register* and would be accessible at regulations.gov. The EPA would accept public comments for 60 days after the proposed rule is published in the *Federal Register*.

We look forward to hearing from you on this important matter.

Sincerely,



Elizabeth Southerland
Director, Office of Science and Technology

Enclosure

**Consultation and Coordination Plan for the
EPA's Potential Reinterpretation of Clean Water Act TAS Provisions
April 2014**

Background Information

The U.S. Environmental Protection Agency (EPA) is initiating consultation and coordination with federally-recognized Indian tribes concerning a potential reinterpretation of Clean Water Act provisions regarding treatment of tribes in the same manner as a state (TAS). The reinterpretation could reduce some of the time and effort for tribes submitting applications for TAS for regulatory programs under the Clean Water Act.

Specifically, EPA is considering reinterpreting section 518(e) as a delegation by Congress of authority to eligible tribes to administer Clean Water Act regulatory programs over their entire reservations, thereby removing the requirement for applicant tribes to demonstrate their inherent regulatory authority. This reinterpretation would be supported by, among other things, an analysis of events occurring since 1991 when EPA originally interpreted the Act's TAS provisions in the context of a regulatory program. These events include the approach EPA used in implementing the Clean Air Act's TAS provision in 1998, and certain judicial cases.

To accomplish this streamlining, EPA would not need to amend any regulatory text. Instead, EPA would revise its TAS guidance to remove provisions relating to the demonstration of inherent authority, including provisions relating to the so-called *Montana* test, which addresses tribal inherent regulatory authority over non-member activities.¹ Instead, applicant tribes would simply confirm their willingness and ability to receive and exercise a delegation of Congressional authority within the identified exterior boundaries of their reservation.

This action will not modify any other TAS eligibility requirements, such as the need for a tribe to demonstrate its capability for running the Clean Water Act program and to identify the exterior reservation boundaries of the area for which it seeks eligibility. Pursuant to existing regulations, EPA would continue to provide an opportunity for comment to EPA on the tribe's TAS application and/or program submission before EPA makes a decision.

The EPA is committed to working with tribes to enable eligible tribes' full use of CWA regulatory programs to protect waters on their reservations. The proposed approach is consistent with suggestions made by the National Tribal Water Council to EPA's Office of Water in March 2013.

Tribal Consultation and Coordination Process and Time Frame

The following table lays out the process and timeline for consultation and coordination on this action. Tribes may access this letter, and related consultation information on the EPA Tribal Portal under Tribal Consultation Opportunities, located at <http://tcots.epa.gov/oita/TConsultation.nsf/TC?OpenView>.

¹ This element of the current process derives from the Supreme Court's decision in *Montana v. U.S.*, 450 U.S. 544 (1981) and may include, among other things, a demonstration by the tribe that activities on nonmember-owned fee lands within the reservation could have substantial direct effects on the tribe's health or welfare.

Date	Event	Contact Information
Date of this letter through June 20, 2014	Consultation and Coordination period before proposal of the reinterpretation	EPA Contact: Beth LeaMond, U.S. EPA, Mail Code 4305T, 1200 Pennsylvania Avenue, NW, Washington, DC 20460 Phone: (202) 566-0444 E-mail: Leamond.beth@epa.gov
April 22, 2014	National Tribal Water Council Meeting with EPA: TAS discussion session	For NTWC members only
May 22, 2014, 2:00 pm-4:00 pm Eastern Time	Tribes-Only Consultation and Coordination Webinar, "Potential Reinterpretation of CWA TAS Provisions"	To register: http://www.horsleywitten.com/TribalConsultation or call Erin Cabral at 508-833-6600. EPA Contact: Beth LeaMond, U.S. EPA, Mail Code 4305T, 1200 Pennsylvania Avenue, NW, Washington, DC 20460 Phone: (202) 566-0444 Email: Leamond.beth@epa.gov
May 28, 2014, 1:00 pm -3:00 pm Eastern Time	Tribes-Only Consultation and Coordination Webinar, "Potential Reinterpretation of CWA TAS Provisions"	To register: http://www.horsleywitten.com/TribalConsultation or call Erin Cabral at 508-833-6600.. EPA Contact: Same as above
Date to be determined (expected in Fall 2014)	Proposed reinterpretation published in Federal Register	
Extending for 60 days after date of publication	Public comment period (Tribes may submit written comments)	Address and instructions will be provided in the Federal Register notice
Extending up to 60 days after date of publication	Expected phase 2 of consultation and coordination	Details to be provided at a later date

Tribes may also provide consultation and coordination comments at any time by email to TASreinterpretation@epa.gov or by mail to Beth LeaMond at the address shown above.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460

OFFICE OF WATER

March 28, 2014

Re: Consultation on a Rulemaking to Provide More Opportunities for Tribes to Engage in the Clean Water Act Impaired Water Listing and Total Maximum Daily Load Program

Dear Honorable Leader:

The U.S. Environmental Protection Agency (EPA) is initiating consultation and coordination with federally recognized Indian tribes on a proposed rulemaking to provide more opportunities to fully engage tribes in the Clean Water Act (CWA) Section 303(d) Impaired Water Listing and Total Maximum Daily Load (TMDL) Program. This action will provide such opportunities by clarifying the process for tribes to obtain Treatment in a Similar Manner as a State (TAS) authority for the Program.

Under section 303(d) of the CWA, states, territories, and authorized tribes develop lists of impaired waters. These are waters for which technology-based regulations and other required controls are not stringent enough to meet the water quality standards set by states, territories, and authorized tribes. The law requires that states, territories, and authorized tribes: 1) develop lists of impaired waters; 2) establish priority rankings for waters on the lists; and 3) develop TMDLs for these waters. A TMDL is a calculation of the maximum amount of a pollutant that a water body can receive and still safely meet water quality standards.

In this rulemaking, EPA will propose a process for Indian tribes to apply to EPA for authority to establish lists of impaired waters and TMDLs pursuant to section 303(d) of the CWA. You may be interested in this rulemaking if your tribe:

- is one of over 60 tribes found eligible for or seeking eligibility for TAS for the purpose of administering water quality standards under the CWA and is interested in submitting an application for TAS for the CWA section 303(d) Impaired Water Listing and TMDL Program,
- is interested in submitting a joint application for Water Quality Standards and Impaired Water Listing and TMDL Programs,
- is interested in developing impaired water lists and TMDLs, or
- has an interest in impaired water listing and TMDLs in other jurisdictions.

This consultation and coordination process will be conducted in accordance with the *EPA Policy on Consultation and Coordination with Indian Tribes* (<http://www.epa.gov/tribal/consultation/consult-policy.htm>). The EPA invites you and your designated consultation representative(s) to participate in a “tribes only” webinar on Tuesday, April 29, 2014 from 1:00 p.m. to 3:00 p.m. Eastern. You may register for the webinar at <https://www2.gotomeeting.com/register/171746226>. EPA also extends an invitation for tribes to request government-to-government consultation during the consultation and coordination period. The EPA’s consultation and coordination process with tribes for this action is

expected to extend from April 8, 2014 until May 22, 2014, and then continue in late summer 2014 until the public comment period on this proposed rulemaking ends.

Attached is a consultation plan for this action that includes a description of the action under consultation, and the process the EPA intends to follow, including a timeline for the consultation and coordination, and information on how you can provide input on this action. This information is also available on the EPA's Tribal Portal, <http://www.epa.gov/tribal/>.

The official EPA contact person for this consultation and coordination process is Sarah Furtak, Office of Water, (202) 566-1167, furtak.sarah@epa.gov. Please do not hesitate to contact her should you have any questions or if you would like to request alternate arrangements to the process outlined in the consultation plan.

Whether or not you participate in this consultation process, you will still have the opportunity to provide input on the proposed rulemaking during the public comment period. The proposed rule is expected to be published in the *Federal Register* in summer 2014. The EPA will accept public comments until 60 days after the proposed rule is published in the *Federal Register*.

We look forward to hearing from you on this important matter.

Sincerely,

Tom Wall for /s/

Benita Best-Wong
Director
Office of Wetlands, Oceans and Watersheds

cc: Tribal Environmental Directors
Regional Indian Coordinators
Section 106 Tribal Coordinators
Matthew Richardson, Acting OW Tribal Coordinator
Felicia Wright, OW Tribal Coordinator

Enclosure

Consultation and Coordination Plan
For the EPA's Rulemaking to Provide More Opportunities to Fully Engage Tribes in the Clean
Water Act Section 303(d) Impaired Water Listing and Total Maximum Daily Load (TMDL)
Program
March 2014

Information on the Rulemaking to Provide More Opportunities to Fully Engage Tribes in Clean Water Act Section 303(d) Impaired Water Listing and TMDL Program

This proposed rule will provide tribes more opportunities to fully engage in the Clean Water Act (CWA) Section 303(d) Impaired Water Listing and Total Maximum Daily Load (TMDL) Program. According to CWA section 518(e), EPA shall, in consultation with Indian tribes, promulgate final regulations which specify how Indian tribes shall be treated as states for purposes of this Act.

Under section 303(d) of the CWA, states, territories, and authorized tribes develop lists of impaired waters. These are waters for which technology-based regulations and other required controls are not stringent enough to meet the water quality standards set by states, territories, and authorized tribes. The law requires that states, territories, and authorized tribes: 1) develop lists of impaired waters; 2) establish priority rankings for waters on the lists; and 3) develop TMDLs for these waters. A TMDL is a calculation of the maximum amount of a pollutant that a water body can receive and still safely meet water quality standards.

Other programs (e.g., CWA sections 106, 303(c), 319, 402) have Treatment in a Similar Manner as a State (TAS) regulations; however, existing regulations do not explicitly address TAS for CWA Section 303(d).

The proposed rule will provide a process for eligible tribes to assume the CWA section 303(d) and TMDL portion of their water pollution control program and more fully engage in restoring, maintaining, and protecting tribal waters. Tribes that apply and are found eligible for administering section 303(d) would be responsible for analyzing their monitoring data to assess tribal waters to develop impaired waters lists, for developing TMDLs for EPA review, and for overseeing implementation of the EPA-approved TMDL cleanup plans.

Potential Impact to Tribes

All tribes, especially those that are interested in more fully engaging in the CWA Section 303(d) Impaired Water Listing and TMDL Program, are invited to participate. We greatly appreciate any and all tribal views on the process EPA will propose for tribes to obtain TAS authority for the CWA Section 303(d) Impaired Water Listing and TMDL Program.

Your tribe may be affected by this rulemaking if your tribe:

- is one of over 60 tribes found eligible or seeking eligibility for TAS for the purpose of administering water quality standards under the CWA and is interested in submitting an application for TAS for the CWA section 303(d) Impaired Water Listing and TMDL Program,

- is interested in submitting a joint application for Water Quality Standards and Impaired Water Listing and Total Maximum Daily Load (TMDL) Programs,
- is interested in developing impaired water lists and TMDLs, or
- has an interest in impaired water listing and TMDLs in other jurisdictions.

EPA would be interested in input from the 48 tribes that have undergone the Water Quality Standards TAS process. EPA can draw on that experience as we work to clarify the TAS process for listing and TMDLs. Another example of valuable input from tribes includes experience that tribes have had in protecting, restoring, and maintaining water quality. EPA is also interested in understanding why a tribe may or may not be interested in seeking TAS authority for the CWA Section 303(d) Impaired Water Listing and TMDL Program at this time.

Opportunities for Tribes to Participate

The EPA is seeking consultation and coordination with tribes on the proposed rulemaking. To facilitate the consultation and coordination, the Agency will hold a tribes-only webinar for tribal leaders and staff. The webinar will consist of two parts. The first part will provide tribes an opportunity to ask questions and learn more about the rulemaking. The last part of the webinar will be reserved for consultation comments from tribal leaders or their consultation designees.

Tribes may submit written consultation comments to:

Sarah Furtak
1200 Pennsylvania Avenue, NW
Mail code: 4503T
Washington, DC 20460

Tribal Consultation and Coordination Process and Time Frame

The table below lays out the process and timeline for consultation and coordination on this action. Tribes may access related consultation information on the EPA Tribal Portal under Tribal Consultation Opportunities, located at <http://tcots.epa.gov/oita/TConsultation.nsf/TC?OpenView>.

Date	Event	Contact Information
April 8, 2014 – May 22, 2014	Time Frame for Tribal Consultation	EPA Contact: Sarah Furtak 1200 Pennsylvania Avenue, NW Mail code: 4503T Washington, DC 20460 Phone: (202) 566-1167 E-mail: furtak.sarah@epa.gov

Date	Event	Contact Information
April 22, 2014	National Tribal Water Council Face-to-Face Meeting with EPA	<p>Sarah Furtak 1200 Pennsylvania Avenue, NW Mail code: 4503T Washington, DC 20460</p> <p>Phone: (202) 566-1167 E-mail: furtak.sarah@epa.gov</p>
April 29, 2014 from 1:00 p.m. – 3:00 p.m. Eastern	Tribal Information and Consultation Webinar	<p>The webinar will be held using Gotowebinar. To register for the webinar, please visit:</p> <p>https://www2.gotomeeting.com/register/171746226</p> <p>You will receive an email confirmation after your registration has been submitted.</p> <p>Following registration and within one week of the webinar, you will receive an email with information for accessing the webinar on the day of the event.</p> <p>An archived copy and transcript of the Webinar will be available at http://epa.gov/owow/tmdl about 2 weeks after the webinar.</p>
End Date of This Phase of Tribal Consultation: May 22, 2014	Tribes may submit written comments	<p>Sarah Furtak 1200 Pennsylvania Avenue, NW Mail code: 4503T Washington, DC 20460</p>
Summer 2014 (Expected): Tribal Consultation Continues	Tribal Information and Consultation Webinar During the Federal Register Notice Public Comment Process	<p>More information to follow.</p> <p>Sarah Furtak 1200 Pennsylvania Avenue, NW Mail code: 4503T Washington, DC 20460</p>

Potential Reinterpretation of a Clean Water Act Provision Regarding Tribal Eligibility to Administer Regulatory Programs

USEPA Office of Science and Technology
July 2014

1

This Presentation Covers...

- Key Terms
- Issue & Purpose
- TAS Provision of the Clean Water Act
- Current Interpretation of TAS
- Potential Reinterpretation of TAS
- Working Schedule
- For More Information

2

Key Terms

- **CWA** – the Clean Water Act
- **TAS** – treatment of tribes in a similar manner as a state, for the purposes of administering EPA programs.
- **Tribe** – one of the 566 Indian tribes that are federally recognized, of which over 300 have reservations.
- **Reservation** – either a formal reservation or tribal trust land outside of a formal reservation.
- **Nonmember fee lands** – lands within a reservation that are owned outright (“in fee simple”) by nonmembers of the tribe.

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Key Terms

- **Regulatory program** – one of the following CWA programs:

- | | |
|---------------------------------------|---|
| • Sec. 303(c) water quality standards | • Sec. 401 water quality certifications |
| • Sec. 303(d) listings and TMDLs | • Sec. 402 NPDES permits |
| | • Sec. 404 dredge or fill permits |

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Issue

- EPA took a cautious approach in 1991 when it interpreted a CWA provision to mean that each tribe seeking TAS must demonstrate its own inherent regulatory authority.

Purpose

- To describe a potential reinterpretation of the CWA's TAS provision that EPA is considering.

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TAS Provision of the CWA

- Section 518 of the Clean Water Act authorizes EPA to treat a tribe in a similar manner as a state for purposes of a regulatory program if the tribe:

- | |
|---|
| 1. Is federally recognized and has a reservation. |
| 2. Has a governing body carrying out substantial governmental duties and powers. |
| 3. Has appropriate authority to regulate the quality of reservation waters. |
| 4. Is reasonably expected to be capable of carrying out the functions of the program. |

- EPA has issued program-by-program regulations specifying:
 - The information a tribe must submit when applying for TAS
 - The process EPA must follow in acting on a TAS application

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TAS Provision of the CWA

Results to date:

- Regulatory programs
 - ✓ 303(c) WQ standards and 401 certifications48 tribes approved
 - ✓ 303(d) listings/TMDLsTAS process under consideration
 - ✓ 402 NPDESsome interest, no tribes approved
 - ✓ 404 dredge or filllimited interest, no tribes approved
- Grant programs*
 - ✓ 106 management programs266 tribes approved
 - ✓ 319 nonpoint source management180 tribes approved

*Grant programs are not discussed further in this presentation. Tribal grant applicants do not need to demonstrate regulatory jurisdiction.

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Current Interpretation of TAS

In 1991,* EPA interpreted the CWA TAS provision to mean:

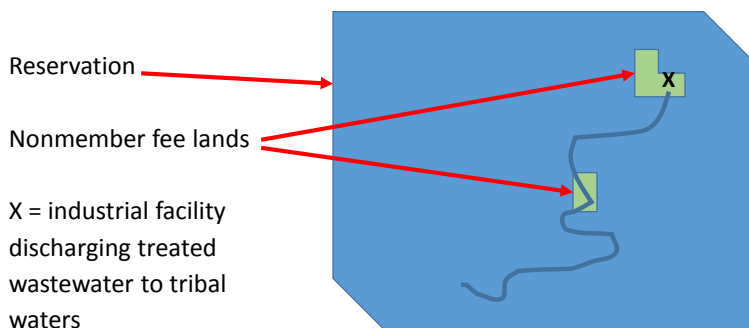
- A tribe must demonstrate its inherent regulatory authority to be eligible for TAS for a regulatory program.
- A tribe with nonmember-owned fee lands needs to meet the "Montana" test.
 - Generally includes a factual demonstration that nonmember activities on nonmember-owned fee lands could have a substantial, direct effect on the tribe's health or welfare. See *Montana v. U.S.*, 450 U.S. 544 (1981)

*The interpretation appeared in a CWA TAS rule preamble, 56 FR 64895, 12-12-1991. At the time, EPA recognized that other interpretations were available, but chose a cautious approach pending further Congressional or judicial guidance.

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Current Interpretation of TAS

Example of “nonmember activities on nonmember-owned fee lands that could have a substantial, direct effect on the tribe’s health or welfare”



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Potential Reinterpretation of TAS

- EPA is considering reinterpreting CWA section 518 as an express delegation by Congress to eligible tribes to administer CWA regulatory programs over their reservations irrespective of who owns the land.
- This would replace EPA’s current interpretation that a tribe must demonstrate its inherent regulatory authority.

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Potential Reinterpretation of TAS

The potential reinterpretation is supported by:

- The plain language of Clean Water Act section 518
- A similar approach applied in implementing the Clean Air Act TAS provisions
- Relevant judicial cases since 1991
- EPA's experience since 1991

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Potential Reinterpretation of TAS

EPA would accomplish the reinterpretation by issuing an interpretive rule after soliciting and considering public comments.

- The reinterpretation would replace EPA's 1991 interpretation.
- The interpretive rule would include a revision to EPA's current guidance for tribal applications.*
- Neither the CWA statutory language nor EPA's implementing regulations would be revised; all existing regulatory requirements will remain.

*Current guidance: *Strategy for Reviewing Tribal Eligibility Applications to Administer EPA Regulatory Programs*, EPA, 2008, <http://www.epa.gov/indian/laws/tas.htm>, Attachments B and C

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Potential Reinterpretation of TAS

EPA regulations require the tribe to demonstrate that it...	Current Interpretation	After Reinterpretation
1. Is federally recognized and has a reservation.	✓	✓
2. Has a governing body carrying out substantial governmental duties and powers.	✓	✓
3. Has appropriate authority to regulate the quality of reservation waters. • Tribe must provide a map or legal description of reservation boundaries	✓	✓
• Legal counsel must describe the basis of the tribe's authority by...	Demonstrating inherent authority* and, if fee lands on reservation, meeting the <i>Montana</i> Test	Relying on the Congressional delegation of authority
• Tribe must identify the surface waters to be regulated	✓	✓
4. Has (or has a plan for developing) the capability to administer the program	✓	✓

*As specified in EPA's 1991 preamble and current guidance

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Potential Reinterpretation of TAS

Comment rounds for tribes to set Water Quality Standards:	Comments from	Current Interpretation	After Reinterpretation
• EPA seeks comments on tribal application's assertion of authority	Appropriate govt. entities, local parties	✓	✓
• EPA seeks comments on EPA's factual findings concerning inherent tribal authority	Appropriate govt. entities, local parties	✓	(Not needed)
• Tribe seeks comments on its water quality standards before submitting to EPA for approval	Public	✓	✓

Comment round for tribes to issue Sec. 402 or 404 Permits:

• EPA seeks comments on tribe's permit program application (including TAS elements)	Public	✓	✓
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Potential Reinterpretation of TAS

Recap of potential **changes**:

- Replace demonstration of inherent regulatory authority with reliance on the Congressional delegation of authority
- Remove one of three rounds of comments for tribes to set WQS

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Potential Reinterpretation of TAS

Recap of what would **stay the same**:

- All other TAS eligibility requirements established in the Act and EPA's regulations
- All other opportunities for comment before final EPA action
 - The only comment process being eliminated is a secondary process that would be obsolete since it addressed solely issues of inherent authority
- Limitation to Indian reservations
 - Reservation land status issues can be raised during comment process
- No effect on tribal criminal enforcement authority
 - Federal government will continue to generally take the lead on appropriate criminal enforcement

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Working Schedule

- Tribal consultation/coordinationApril 18 – July 7, 2014
- State association meetingJuly 8, 2014

If EPA decides to proceed:

SUBJECT TO CHANGE

- Proposal of interpretive rule in Federal RegisterFall 2014
- Public comment period (60 days)Fall 2014
- Issue final interpretive rule in Federal Register.....Fall 2015

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For More Information

- To view background materials:
http://water.epa.gov/scitech/swguidance/standards/wqslibrary/tribes_index.cfm
- To ask questions or provide comments/views, please email:
TASreinterpretation@epa.gov

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Any Questions?



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Background of Hells Canyon Site Specific Criteria¹

The Idaho Department of Environmental Quality submitted a revised Clean Water Act Water Quality Standard (WQS), docket number 58-0102-1102, <http://www.deq.idaho.gov/laws,-rules,-etc/deq-rulemakings/docket-no-58-0102-1102-final-rule.aspx>, to the EPA for review and approval on June 8th, 2012. The revised WQS consists of a revision to Idaho's Site Specific Criterion (SSC) for temperature for the Snake River from Hells Canyon Dam to the Salmon River, changing it from a maximum of the weekly maximum temperatures (MWMT) of 13°C, to a weekly maximum temperature (WMT) of 14.5°C. The language also includes a more narrowly specified length of time over which the spawning criterion is applicable; instead of applying from October 23rd through April 15th as stated in the original language, the revised language now includes reference to the time period over which the averaging is done, that the WMT is a lagged average, and that the criterion only applies starting on October 29th.

Water quality standards for aquatic life protection identify the level of a pollutant or other measurable parameter that allows for protection of aquatic life in our nation's water. This aquatic life criterion is developed under Clean Water Act Section 304(a). These criteria are used by states and tribes to establish water quality standards and provide a basis for controlling discharges or releases of pollutants. An aquatic life criterion is the highest concentration of a pollutant or parameter in water that is not expected to pose a significant risk to the majority of species in a given environment.

EPA must take action under CWA section 303(c) to approve or disapprove this revised aquatic life water quality criterion. If approved, the water quality criterion would define the water quality necessary to support fall Chinook spawning and incubation in the waters of the Snake River under jurisdiction of the State of Idaho, and would serve as the water quality target for a number of CWA regulatory processes, including National Pollutant Discharge Elimination System (NPDES) permits, 401 certifications, and Total Maximum Daily Loads (TMDLs).

Here is the text of the revised site specific criterion:

286. SNAKE RIVER, SUBSECTION 130.01, HUC 17060101, UNIT S1, S2, AND S3; SITE-SPECIFIC CRITERIA FOR WATER TEMPERATURE.

~~A maximum weekly maximum temperature of thirteen degrees C (13C) to protect fall chinook spawning and incubation applies from October 23rd through April 15th in the Snake River from Hell's Canyon Dam to the Salmon River.~~ Weekly maximum temperatures (WMT) are regulated to protect fall chinook spawning and incubation in the Snake River from Hell's Canyon Dam to the confluence with the Salmon River from October 23 through April 15. Because the WMT is a lagged seven (7) day average, the first WMT is not applicable until the seventh day of this time period, or October 29. A WMT is calculated for each day after October 29 based upon the daily maximum temperature for that day and the prior six (6) days. From October 29 through November 6, the WMT must not exceed fourteen point five degrees C

¹ While Idaho approved the site specific criteria, it is important to note that neither EPA nor the Oregon Department of Environmental Quality have made determinations on the site specific criteria. Further, Idaho Power Company's newest 401 application (May 23, 2014) retains the 13 C standard.

(14.5°C). From November 7 through April 15, the WMT must not exceed thirteen degrees C (13°C).



STATE OF IDAHO
DEPARTMENT OF
ENVIRONMENTAL QUALITY

1410 North Hilton • Boise, Idaho 83706 • (208) 373-0502

C.L. "Butch" Otter, Governor
Curt Fransen, Director

June 8, 2012

Mr. Michael Bussell, Director
Office of Water and Watersheds, Region 10
US Environmental Protection Agency
1200 6th Avenue
Seattle, Washington 98101

Re: Submission of revised water quality standards for approval: Site-specific temperature criteria for the Snake River from Hell's Canyon Dam to the Salmon River (Idaho docket 58-0102-1102)

Dear Mr. Bussell:

Consistent with the Clean Water Act §303(c) and 40 CFR 131.20, revisions to Idaho's water quality standards (WQS) are hereby submitted for EPA approval. Rulemaking was initiated to modify the current site-specific temperature criterion to protect fall Chinook spawning below Hell's Canyon Dam by providing for a two week transition in temperatures from October 23rd through November 6th. Idaho Power Company (IPC) requested this rulemaking and provided extensive supporting information summarizing years of study they have conducted on spawning conditions in the laboratory and field.

Rulemaking was publically announced with a notice of negotiated rulemaking published in the June 1, 2011 Idaho Administrative Bulletin. The preliminary draft rule was posted on Idaho Department of Environmental Quality's (DEQ) web page May 31, 2011. One negotiated rulemaking meeting was held in Boise at the DEQ State Office building on June 21, 2011. Many individuals and interest groups participated in this public meeting, including EPA regional staff by phone. A meeting sign-in sheet is enclosed. IPC presented in detail the basis for the requested fine-tuning of the spawning temperature criterion. There were many questions and much discussion.

After the meeting DEQ revised its preliminary draft rule as a result of negotiations and review of written comments received. We clarified that a weekly maximum temperature is a lagged seven-day average, calculable each day beyond day six. It was also clarified that the site-specific transition period is from October 23 through November 6; where after the current site-specific criterion remains unchanged.

Although the revised criterion allows somewhat warmer water temperatures for the first two weeks of the spawning and incubation period, which runs from October 23 to April 15, both laboratory and field studies conducted by IPC show that this short period of warmer temperatures is protective of fall Chinook spawning below Hell's Canyon Dam.

1. The laboratory studies of effect of temperature on Chinook egg incubation show no significant effect on incubation success for eggs exposed to the proposed criterion temperatures. Unlike most previous studies of temperature on egg incubation, IPC's studies specifically looked at exposing eggs to a declining ramp in temperature more typical of field exposure.
2. Several years of field observation, work that will continue, shows that:
 - a. Fall Chinook initiate spawning at temperatures even warmer than the proposed criterion, likely anticipating the normal seasonal decline and coming cooler temperatures;
 - b. Under the current thermal regime below Hell's Canyon Dam, which is warmer now than the revised criterion requires, fall Chinook spawning has been improving indicating that these current temperatures are suitable for population recovery;
 - c. The ramp in temperature the revised site-specific criterion allows for closely mimics the typical fall decline in water temperature as seasons change.

DEQ published the rule revised as a result of negotiations as a proposed rule in the August 3, 2011 Idaho Administrative Bulletin announcing a 30-day public comment period. No request for public hearing was received and none was held. Written comments were received from six parties. A compilation of comments and DEQ's response is attached. No revisions were made to the proposed rule.

The rule was considered by the Idaho Board of Environmental Quality on November 10, 2011. IPC gave a presentation on the rule, an update of their presentation during negotiated rulemaking. The proposed rule was adopted with no changes. The now pending rule was noticed in the December 7, 2011 Idaho Administrative Bulletin. The rule was finalized by the 2012 Idaho Legislature and became effective under Idaho law on March 29, 2012.

In addition to the published notices, DEQ created an e-mail list of participants and other likely interested parties to which DEQ sent notice of meeting dates, rule drafts, comments and response, and other documents distributed during this rulemaking. A record of the rulemaking process can be accessed online at: <http://www.deq.idaho.gov/laws,-rules,-etc/deq-rulemakings/docket-no-58-0102-1102-final-rule.aspx>. All materials posted at this URL are hereby incorporated by reference in this submittal.

The rule submittal package includes:

- 1) This cover letter, briefly describing the rule, the rulemaking process, and the contents of the package supporting the rule change being submitted for your approval;
- 2) June 1, 2011 Notice of Negotiated Rulemaking – Announcing DEQ's intention to revise its Water Quality Standards, IDAPA 58.01.02, to modify the existing site-specific salmonid spawning criteria for the Snake River below Hell's Canyon Dam (WQS sec 286), per IPC's request;
- 3) Scanned copy of sign-in sheets from June 21, 2011 rulemaking meeting;
- 4) *Proposal to Initiate Negotiated Rule Making for Site Specific Temperature Criteria for Fall Chinook Salmon Spawning in the Hells Canyon Reach of the Snake River*, July 2010, prepared by IPC. This document summarizes both laboratory and field studies of fall Chinook spawning as affected by water temperature conducted by IPC and provide the scientific justification for the criteria change. This proposal was provided to DEQ and then made available to the public;

Mr. Michael Bussell
June 8, 2012
Page 3

- 5) August 3, 2011 Notice of Proposed Rule – Announcing opening of 30-day public comment period on the proposed rule language resulting from negotiations, including text of the affected portions of the water quality standards showing changes from existing rule language in legislative markup format (deletions struck out and proposed additions underlined) and availability of supporting documents;
- 6) Summary of public comment and DEQ's response;
- 7) IPC's presentation to the DEQ Board on November 10, 2011;
- 8) December 7, 2011 Notice of Pending Rule – Announcing rule adoption by the DEQ Board;
- 9) An Attorney General's certification that the rules were adopted according to state law;
- 10) Spring 2012 assessment of status of fall Chinook spawning, May 22, 2012 letter to DEQ from IPC;
- 11) Electronic copies of the above materials as well as the rulemaking record online burned onto CD for your convenience.

If you have any questions on this rulemaking and the enclosed supporting materials, please contact Don A. Essig, 208-373-0119, or Don.Essig@deq.idaho.gov.

Sincerely,



Barry Burnell
Water Quality Division Administrator

BNB:DE:ls

Enclosures

c: Lisa Macchio, EPA (with enclosures)
Don Essig, DEQ (w/o enclosures)
Doug Conde, DEQ (w/o enclosures)
Michael McIntyre, DEQ (w/o enclosures)

IDAPA 58 - DEPARTMENT OF ENVIRONMENTAL QUALITY

58.01.02 - WATER QUALITY STANDARDS

DOCKET NO. 58-0102-1102

NOTICE OF RULEMAKING - PROPOSED RULEMAKING

AUTHORITY: In compliance with Section 67-5221(1), Idaho Code, notice is hereby given that this agency has initiated proposed rulemaking. This action is authorized by Sections 39-105, 39-107, and 39-3601 et seq., Idaho Code.

PUBLIC HEARING SCHEDULE: No hearings have been scheduled. Pursuant to Section 67-5222(2), Idaho Code, a public hearing will be held if requested in writing by twenty-five (25) persons, a political subdivision, or an agency. Written requests for a hearing must be received by the undersigned on or before August 19, 2011. If no such written request is received, a public hearing will not be held.

DESCRIPTIVE SUMMARY: DEQ proposes to revise its Water Quality Standards, IDAPA 58.01.02, to include a site-specific temperature criterion for the Snake River to protect fall spawning of Chinook salmon from Hell's Canyon Dam to the Salmon River. This site-specific criterion would be a change from the current criterion of a maximum weekly maximum of 13°C from October 23rd through April 15th to a site-specific criterion of a weekly maximum temperature (WMT) of 14.5°C from Oct 23rd through November 6th and a WMT of 13°C from November 7th through April 15th. The first date a WMT can be calculated is October 29th. The proposed rule change recognizes the declining thermal regime in the Snake River during the fall spawning season and that higher temperatures at the outset of the spawning season are both protective and supportive of the fall Chinook salmon spawning and incubation occurring in the Snake River during this time. This proposed rule change recognizes that a need to change the site-specific temperature criterion in the Snake River between the Hell's Canyon Dam and the confluence with the Salmon River exists. The current site-specific criterion of 13°C between October 23rd and April 15th is not regularly met during the first 14 days of the fall spawning season and yet salmonid spawning and incubation is at the highest levels of the last two decades. The proposed rule changes the temperature criteria to 14.5°C for the first 14 days of the spawning period and then reduced to 13°C for the balance of the fall and early spring.

All who fish and recreate in the Snake River, Idaho Power Company who operates the Hell's Canyon Dam, and Native American tribes may be interested in commenting on this proposed rule. The proposed rule text is in legislative format. Language the agency proposes to add is underlined. Language the agency proposes to delete is struck out. It is these additions and deletions to which public comment should be addressed.

After consideration of public comments, DEQ intends to present the final proposal to the Board of Environmental Quality at the November 2011 Board meeting for adoption as a pending rule. The rule is expected to be final and effective upon the adjournment of the 2012 legislative session if adopted by the Board and approved by the Legislature.

INCORPORATION BY REFERENCE: Pursuant to Section 67-5229(2)(a), Idaho Code, the following is a brief synopsis of why the incorporation by reference is necessary: Not applicable.

NEGOTIATED RULEMAKING: The text of the proposed rule has been drafted based on discussions held and concerns raised during negotiations conducted pursuant to Section 67-5220, Idaho Code, and IDAPA 58.01.23.810-815. On June 1, 2011, the Notice of Negotiated Rulemaking was published in the [Idaho Administrative Bulletin, Vol. 11-6, pages 77 through 78](#), and a preliminary draft rule was made available for public review. A meeting was held on June 21, 2011. Several members of the public participated in this negotiated rulemaking process by attending the meeting and by submitting written comments. A record of the negotiated rule drafts, written comments received, and documents distributed during the negotiated rulemaking process is available at <http://www.deq.idaho.gov/58-0102-1102-proposed>.

IDAHO CODE SECTION 39-107D STATEMENT: The standards included in this proposed rule are not broader in scope, nor more stringent, than federal regulations and do not regulate an activity not regulated by the federal government.

FISCAL IMPACT STATEMENT: The following is a specific description, if applicable, of any negative fiscal impact on the state general fund greater than ten thousand dollars (\$10,000) during the fiscal year when the pending rule will become effective: Not applicable.

ASSISTANCE ON TECHNICAL QUESTIONS AND SUBMISSION OF WRITTEN COMMENTS: For assistance on technical questions concerning this rulemaking, contact Don Essig at don.essig@deq.idaho.gov, (208)373-0119.

Anyone may submit written comments by mail, fax or e-mail at the address below regarding this proposed rule. DEQ will consider all written comments received by the undersigned on or before September 2, 2011.

DATED this 8th day of July, 2011.

Paula J. Wilson
Hearing Coordinator
Department of Environmental Quality
1410 N. Hilton
Boise, Idaho 83706-1255
(208)373-0418/Fax No. (208)373-0481
paula.wilson@deq.idaho.gov

THE FOLLOWING IS THE PROPOSED TEXT OF DOCKET NO. 58-0102-1102

286. SNAKE RIVER, SUBSECTION 130.01, HUC 17060101, UNIT S1, S2, AND S3; SITE-SPECIFIC CRITERIA FOR WATER TEMPERATURE.

~~A maximum weekly maximum temperature of thirteen degrees C (13C) to protect fall chinook spawning and incubation applies from October 23rd through April 15th in the Snake River from Hell's Canyon Dam to the Salmon River.~~ Weekly maximum temperatures (WMT) are regulated to protect fall chinook spawning and incubation in the Snake River from Hell's Canyon Dam to the confluence with the Salmon River from October 23 through April 15. Because the WMT is a lagged seven (7) day average, the first WMT is not applicable until the seventh day of this time period, or October 29. A WMT is calculated for each day after October 29 based upon the daily maximum temperature for that day and the prior six (6) days. From October 29 through November 6, the WMT must not exceed fourteen point five degrees C (14.5°C). From November 7 through April 15, the WMT must not exceed thirteen degrees C (13°C). (4-6-05)()

DEQ RESPONSE TO COMMENTS
Water Quality Standards Rule Docket 58-0102-1102
Hells Canyon-Snake River Site Specific Spawning Criteria

Comments were received from 6 parties. Comments from Idaho Power and NOAA Fisheries were supportive of the proposal, the others raised various criticisms. Several of the criticisms received were similar in nature, thus DEQ has paraphrased and grouped them by topic for purposes of this response.

After reading and considering all the comments received, DEQ has decided to proceed with adoption of the site-specific spawning criterion as proposed in the August 3, 2011 Idaho Administrative Bulletin.

Commenters:

- 1 National Oceanic and Atmospheric Administration, National Marine Fisheries Service
- 2 Environmental Protection Agency Region 10 (EPA)
- 3 Barker Rosholt & Simpson LLP on behalf of Idaho Power Company (IPC)
- 4 Nez Perce Tribe
- 5 Columbia River Inter-Tribal Fish Commission
- 6 Idaho Rivers United

These numbers are used parenthetically below to identify those who made or echoed a particular critical comment.

The reach of Snake River to which criteria would be applied is not natural (*Commenter 4 &5*)

DEQ's Response:

DEQ agrees the Hell's Canyon Complex (HCC) of dams has created an unnatural environment in the Snake River below the dams. In fact, the current unnatural conditions below the dams are thermally more favorable to fall Chinook spawning than existed prior to the HCC, creating a new spawning area. That this new spawning area is unnatural does not diminish its importance nor does it say anything about temperatures that would protect Fall Chinook Spawning, which is the goal of criteria.

Altering EPA's regionally recommended criterion on a site-specific basis would need to be based on unambiguous new scientific information and analysis. (*Commenter 2*)

DEQ's Response:

Idaho Power Company has presented new scientific information and analysis that support the proposed site-specific temperature criterion. The work published in Geist et al. (2006) is a detailed and site-specific study of fall Chinook thermal spawning requirements, under a declining thermal regime. DEQ finds this work to be well done and supports the minor adjustment in spawning criteria proposed. This is new information, i.e. since EPA's 2003 regional temperature criteria recommendations were put forth.

There is always uncertainty, some ambiguity, in scientific inquiry. The federal regulations for water quality criteria require that there is a "sound scientific rationale" and, if departing from EPA 304(a) recommendations, that "scientifically defensible methods" be used. DEQ believes this requirement has been met in the work of Geist et al and supporting documentation and analysis put together by Idaho Power (ref IPC proposal of July 2010).

See also IPC's response to this comment at page 4 of their September 2, 2011 letter to DEQ.

Should discuss why this river segment and population of Fall Chinook salmon require less stringent criteria than other Fall Chinook populations. (Commenter 2)

DEQ's Response:

It is the very intent and purpose of site-specific criteria to depart from the norm, taking into account site-specific knowledge. The proposed site-specific criterion looks specifically at the Snake River below Hells' Canyon and the population of fall Chinook salmon therein, thus by design it does not look at other populations in other settings where the criterion would not be applied. NOAA-NMFS has stated that based on their review of the most recent studies and the data that they collect on fall Chinook population life stages that the current river conditions with temperatures higher than the proposed site specific criteria is fully supporting fall Chinook populations.

With regard to other fall Chinook populations in other rivers, it might well be asked why is it they require more stringent criteria than proposed here? Although we cannot say for sure without further study, it seems at least plausible that the findings in the Snake River Hells Canyon that fish initiate spawning before temperatures reach EPA's recommended criterion in anticipation of cooler temperatures to follow is not unique. If the findings in Hell's Canyon prove to be more typical then there is an argument for revising the general criterion recommended by EPA. This is beyond the scope of the present work and proposal.

See also IPC's response to this comment at page 5 of their September 2, 2011 letter to DEQ.

Why October 23rd as the start date of spawning period and not the 1st or 15th of a month? (Commenter 2)

DEQ's Response:

This comment appears to be specific to the Oregon water quality standards and IPC's proposal to the Oregon Environmental Quality Commission early this year. However, we can say the date of October 23rd in Idaho's current water quality standards was based on site-specific knowledge of fall Chinook spawning in the Snake River below Hell's Canyon dam and reflects the average date of spawning under current conditions, as is discussed by IPC at page 10 of their September 2, 2011 letter to DEQ.

Since EPA has raised the issue of a shift up or back to a date of Oct. 15th or Nov. 1st for the start of spawning, DEQ will respond. Given that criteria are used to identify waters as impaired and key up restoration activities such as TMDLs, we believe as a general principle that more precision is better than less precision in application of criteria. As a corollary, if less precision is used then more flexibility is needed in evaluating criteria exceedances. Absent flexibility, the seriousness of exceeding criteria and the propensity of fish to anticipate forthcoming cooler temperatures would incline us to shift the date back to Nov. 1st, rather than advance it to Oct. 15th, if forced to choose less precision. With any date flexibility is advisable to deal with inter-annual variations in timing of temperature changes and initiation of spawning.

We think it important to note that the proposed site-specific criterion represents cooler conditions than currently exist in some years. Thus if the proposed criterion is met, the river made cooler, a shift in the start of spawning to earlier in the year would be expected. If we do not adopt the site-specific criterion and somehow meet the 13°C MWMT by Oct 23rd, we would expect the start of spawning to advance even more from our present date.

Setting aside the realization and merits of such shifts in times of spawning, we need to somehow recognize in the water quality standards – either in setting dates of application or the formulation of criteria – that fish anticipate seasonal changes and start spawning before temperatures are optimal. That is what we are doing with this ramped site-specific criterion.

Acclimation temperatures used in the Geist et al. study of 12°C is unlike pre-spawning temperatures of 16.5 to 18°C in the Snake River, bringing applicability of the study into question. (Commenter 2)

DEQ's Response:

While this is a legitimate criticism, concern for the comparability of acclimation temperatures to field conditions appears to be relatively recent and applies as well to almost all of the studies used to support EPA's regional temperature criteria guidance. As is pointed out by IPC (see IPC's response to this comment at page 11 of their September 2, 2011 letter to DEQ), in laboratory testing of thermal tolerance few studies have reported acclimation temperatures and when they did acclimation is typically not like field conditions. Indeed laboratory studies on the whole are very controlled experiments in rather unnatural conditions. If this is sufficient reason to question the applicability of Geist et al. then it is reason to question almost all of the studies supporting EPA's regional guidance as well.

We do not however subscribe to the notion temperature studies with unknown or mismatched acclimation temperatures are without merit; this is simply an area in which future studies of thermal tolerance can be improved. An advantage the Geist et al. study has is its investigation of the effects of a declining thermal regime rather than the constant exposures typical of previous study. In this respect the Geist study is superior, more like real conditions in the Snake than prior studies supporting EPA's recommended 13°C MWMT criterion.

The point is that the Geist et al (2006) work, while not perfect in mimicking real world exposures, is by virtue of its study of declining temperatures closer to the real world than previous studies – it is the best, most recent, relevant study of thermal tolerance for fall Chinook spawning that we have. Furthermore, as IPC points out, the Geist study is not the only work that bears on the question of temperatures that support fall Chinook spawning. Two earlier studies, in which acclimation temperatures are unknown but likely involve a range of pre-spawning thermal histories, concur in a threshold temperature of 16-16.5°C for adverse effects on embryo survival. Although this is the best scientific information before us, the proposed criterion backs off from this threshold to address uncertainty, provide a margin of safety.

Site specific assessment of protective criteria for Fall Chinook in the Snake River should address the adult migration (late summer) through fry emergence (April) period. (Commenter 2, 4 and 5)

DEQ's Response:

EPA Region 10's criteria guidance provides a suite of criteria for addressing all life stages of salmonids, covering all portions of the seasonal cycle in temperature; unlike most criteria which take on a single value year round. That guidance includes temperature criteria to protect both adult migration and salmonid spawning. In the Snake River reach in question the calendar year is covered by EPA's recommended 20°C MWMT for adult migration during the warmer months of the year, and, presently, EPA's recommended 13°C MWMT to protect spawning and incubation during the cooler months, with Oct 23rd and April 15th being the dividing dates. This application of criteria has been approved by EPA.

The criterion proposed here is specific to spawning and does not regulate temperatures outside its period of application. It appears to us the appropriateness of EPA's recommended adult migration criterion is being questioned with this comment and a suggestion being made that late summer temperatures need to be cooler in order to justify slightly warmer criteria at the onset of spawning. We find nothing in EPA's regional guidance or federal rules regarding site-specific criteria that would tie adjustment of one member of a suite of criteria to adjustment of others. If the real issue in the Snake River below Hell's Canyon Dam is pre-spawning conditions, as is suggested by this comment, then we would suggest a separate site-specific criterion needs to be developed for that time period.

While a seasonal temperature criterion only applies during its defined time period and does not control temperatures at other times, it is worth noting that there is nothing in this seasonal application of criteria that would suggest that real world temperatures should or can follow a rectangular, stair-step pattern – i.e. a steady 20°C from late spring through early fall, suddenly plunging to a steady 13°C until the next spring. Rather criteria set an upper limit on the normal seasonal variations in temperature through the course of a year, with most of the time being cooler than criteria and a transition from one time period to the next necessary in order to meet those criteria.

See also IPC's response to this comment at page 12 of their September 2, 2011 letter to DEQ.

The observed increase in returning adult Chinook is confounded by hatchery versus wild components (Commenter 2, 5 & 6)

DEQ's Response:

DEQ agrees that the issue of hatchery supplementation, along with failure of some hatcheries to mark their stock, confounds determination of salmon recovery. It is much less clear to us that hatchery stock differ from wild stock in their thermal preferences; while this is possible it appears unfounded at this time.

What can be said is that fall Chinook salmon, whether hatchery or wild origin, would not return and spawn if conditions in the Snake River in Hell's Canyon were not suitable. As noted by IPC (see IPC's response to this comment at page 14 of their September 2, 2011 letter to DEQ) observations indicate the population is increasing and has in fact exceeded recovery goals in most recent years. While this does not mean there is no room for improvement in thermal conditions it does indicate present conditions are favorable. As noted in the comment received from NOAA-NMFS, the agency charged with salmon recovery:

"There is no direct evidence that the current water temperature regime, which does not meet the current IDEQ water temperature criteria, has negatively affected Snake River fall Chinook salmon. Since 2000 the population has grown substantially under the existing thermal regime."

In the context of the proposed site-specific temperature criterion it is thus important to understand several things about the existing thermal regime of the Snake River in Hell's Canyon:

- 1) By virtue of population trends it is demonstrably favorable to fall Chinook spawning;
- 2) The current temperatures are not the basis of the proposed criterion, rather the criteria are based on laboratory study in conjunction with other information and an understanding of the seasonal cycles of temperature;
- 3) The proposed site-specific criterion would require cooler fall temperature than now exist.

Not meeting the standard is not an indication the standard needs to be changed (Commenter 5)

DEQ's Response:

DEQ agrees. We also agree that there clearly has been a shift in the thermal regime toward warmer fall and winter temperatures, as is common below large storage reservoirs. By most accounts this has created a more favorable thermal regime than existed historically in this reach, prior to upstream impoundment.

Not meeting the current standard is not the basis for the proposed site-specific criterion for fall Chinook spawning in Hell's Canyon. Rather the basis for the proposed site-specific criterion is the scientific information presented by IPC in their documentation provided to DEQ and made available to the public during rulemaking. Although more like current conditions, the proposed criterion will require the Snake River be made cooler.

The proposed ramp in criteria from 14.5°C to 13°C is a rate of decline that is unnatural (Commenter 5)

DEQ's Response:

While a drop from 14.5°C to 13°C MWMT over two weeks may not be natural (the natural rate of decline is unknown and would be difficult to precisely determine) the proposed site-specific criterion does represent a rate of decline far more reasonable than one might imagine is suggested by current criteria, i.e. 20°C to 13°C in a day. As previously noted criteria are not set to define what the pattern of temperature variation should be, but rather to set upper limits, an envelope on normal seasonal cycles, above which temperature should not range (see response above at top of previous page).

It is important to understand that the rate of decline inherent in the proposed criteria:

- 1) Has been studied in controlled laboratory studies;
- 2) Is close to what presently exists, which, as noted above, is favorable to fall Chinook spawning.

Rulemaking was open to all interested parties (Commenter 5)

DEQ's Response:

Open rulemaking is sound public policy, but it is also required by laws governing administrative procedure.

Delayed Spawning leads to delayed emergence and thus greater down river mortality for out-migrating smolts (Commenter 4)

DEQ's Response:

This statement may be true. However, fall Chinook spawning has been documented to occur at temperatures above what is being proposed. Under either the current criteria or the proposed criteria, the Snake River in some years would need to be made cooler in late October than it is now. Thus the timing

of spawning (if it shifts at all) under the proposed criterion may be advanced slightly from what is seen now. The effect of any shift in fall spawning on spring emergence of fry and out migration of smolts depends as well on water temperature through the winter and into spring.

It is apparent that the present unnatural conditions brought about by upstream impoundment have resulted in warmer temperatures through the winter as well. This has improved conditions for spawning and incubation over that which existed in this reach pre-impoundment, and likely accelerated hatch and out migration from pre-impoundment conditions.

Technology exists to cool the river (Commenter 4 & 6)

DEQ's Response:

We don't doubt that technology exists, that modification to existing dams are possible, that would cool the Snake River in the late summer and into early fall, even unnaturally so as we see in the Clearwater River. The consideration of the availability and affordability of such technology is not allowed in the setting of water quality criteria under the Clean Water Act, thus it is irrelevant to the current proposal.

The Endangered Species Act (ESA) requires precaution and resolving uncertainty so as to not increase risk to listed species (Commenter 6)

DEQ's Response:

We believe this is correct, although the ESA does not grant federal agencies any authorities they do already possess. We note with regard to the present proposal:

- 1) The criterion is well supported by scientific study and is proposed at value lower (more conservative) than suggested by this science;
- 2) Intensive ongoing monitoring of existing conditions indicates fall Chinook spawning is protected under the existing thermal regime;
- 3) Will require cooler temperatures than currently exist, thus represents improvement (lower risk) over existing conditions;
- 4) Overall there is very high certainty fall Chinook spawning will continue to be protected; and
- 5) The proposal is supported by NOAA-NMFS, the agency responsible for managing fall Chinook under the ESA.

Antidegradation and climate change

DEQ's Response:

DEQ concurs with the comments of IPC expressed in their September 2, 2011 letter to DEQ.

The Need for a Columbia River Restoration Act of 2014

The Columbia River Inter-Tribal Fish Commission (CRITFC) requests the support of the entire NW Congressional delegation to pass toxics reduction legislation for the Columbia River Basin. Our tribes identify and emphasize water quality in our salmon restoration plan: *Wy-Kan-Ush-Mi Wa-Kish-Wit* (The Spirit of the Salmon).

What the Columbia River Restoration Act (CRRRA) would do:

- Authorize \$50 million a year over five years to fund toxics reduction, protection and restoration projects, programs and studies relating to the Columbia River Basin;
- Create a grant program for toxics reduction, cleanup and monitoring;
- Provide funds directly to the states of Idaho, Oregon, Washington and basin Tribes to distribute to local governments, state agencies, and public and private organizations to perform on-the-ground toxic reduction and habitat restoration projects;
- Bolster local economies by immediately supporting jobs that cannot be exported: contractors, haulers, large equipment operators, road, bridge and culvert construction crews, hydrologists and biologists along with providing a market for nurseries and other building construction materials.

Why do we need a Columbia River Restoration Act?

- Not all Columbia Basin fish are safe to eat. In September of 2013 Health Authorities of Oregon and Washington issued fish consumption advisories for resident fish in the area between Bonneville and McNary Dams.
- Supports a regional collaborative focus of a shared federal waterway;
- Provides sustained monitoring to track contaminant sources and changes over time;
- Provides funds for reducing known contaminated sites;
- Implements ready- strategies.

The Challenge: Columbia River Toxic Contamination

- At-risk are people who consume Columbia River fish, especially our tribal members who consume salmon at a rate 9x the national average;
- PCBs and other contaminants are found in tissues of salmonids and their prey;
- Legacy contaminants such as DDT, which were banned in the 1970s, are still detected in river water, sediments, and juvenile Chinook salmon;
- Other detected pesticides and contaminants such as hormone disrupters from pharmaceutical and personal care products may have detrimental impacts on salmon growth, health, and reproduction.

Contact: Charles Hudson, Director of Government Affairs, hudc@critfc.org; (503) 731-1257

113TH CONGRESS
2D SESSION

H. R. 5216

To amend the Federal Water Pollution Control Act to establish within the Environmental Protection Agency a Columbia River Basin Restoration Program.

IN THE HOUSE OF REPRESENTATIVES

JULY 28, 2014

Mr. BLUMENAUER (for himself and Ms. BONAMICI) introduced the following bill; which was referred to the Committee on Transportation and Infrastructure, and in addition to the Committee on the Budget, for a period to be subsequently determined by the Speaker, in each case for consideration of such provisions as fall within the jurisdiction of the committee concerned

A BILL

To amend the Federal Water Pollution Control Act to establish within the Environmental Protection Agency a Columbia River Basin Restoration Program.

1 *Be it enacted by the Senate and House of Representa-*
2 *tives of the United States of America in Congress assembled,*

3 **SECTION 1. SHORT TITLE.**

4 This Act may be cited as the “Columbia River Basin
5 Restoration Act of 2014”.

6 **SEC. 2. FINDINGS.**

7 Congress finds that—

1 (1) the Columbia River is the largest river in
2 the Pacific Northwest by volume;

3 (2) the river is 1,253 miles long, with a drain-
4 age basin that includes 259,000 square miles, ex-
5 tending to 7 States and British Columbia, Canada,
6 and including all or part of—

7 (A) multiple national parks;

8 (B) components of the National Wilderness
9 Preservation System;

10 (C) National Monuments;

11 (D) National Scenic Areas;

12 (E) National Recreation Areas;

13 (F) other areas managed for conservation;

14 and

15 (G) multiple tribal reservations and over
16 45,000,000 acres of tribally comanaged land;

17 (3) the Columbia River Basin and associated
18 tributaries (referred to in this Act as the “Basin”)
19 provide significant ecological and economic benefits
20 to the Pacific Northwest and the entire United
21 States;

22 (4) traditionally, the Basin includes more than
23 6,000,000 acres of irrigated agricultural land and
24 produces more hydroelectric power than any other
25 North American river;

1 (5) significant commerce takes place on the fed-
2 erally authorized Columbia Snake River System
3 navigation channel, which is 465 miles in length,
4 from the mouth of the Columbia River to Lewiston,
5 Idaho;

6 (6) the Basin—

7 (A) historically constituted the largest
8 salmon-producing river system in the world,
9 with annual returns peaking at as many as
10 16,000,000 fish; and

11 (B) as of the date of enactment of this
12 Act—

13 (i) supports economically important
14 commercial and recreational fisheries;

15 (ii) supports treaty tribal fisheries;

16 (iii) is home to numerous species of
17 salmonids, including steelhead, bull trout,
18 and Kootenai white sturgeon, that are list-
19 ed as threatened species or endangered
20 species under the Endangered Species Act
21 of 1973 (16 U.S.C. 1531 et seq.); and

22 (iv) is a cultural and historical re-
23 source and provides sports and recreation
24 opportunities for millions annually;

1 (7) toxics are present throughout the Columbia
2 River Basin that are harmful to humans, fish, and
3 wildlife;

4 (8) studies have shown that Columbia River
5 fish contain a wide array of contaminants;

6 (9) a fish consumption survey in the Columbia
7 River Basin showed that tribal members were eating
8 6 to 11 times more fish than the estimated national
9 average;

10 (10) in 2013, the States of Oregon and Wash-
11 ington issued a fish advisories warning against con-
12 sumption of resident fish between Bonneville Dam to
13 McNary Dam because of toxic contamination;

14 (11) in 1995, the lower river and estuary was
15 designated an “estuary of national significance” in
16 accordance with section 320 of the Federal Water
17 Pollution Control Act (33 U.S.C. 1330), because of
18 degradation and contamination in the lower river,
19 lack of structure to coordinate programs and poli-
20 cies, significance of the lower river to survival of spe-
21 cies throughout the basin, and the importance the
22 lower river to the economic viability of the region;
23 and

24 (12)(A) in 2006, the Administrator of the Envi-
25 ronmental Protection Agency named the Columbia

1 River Basin 1 of the 10 large aquatic ecosystems in
2 the United States;

3 (B) the Columbia River Basin is the only large
4 aquatic ecosystem in the United States that does not
5 receive dedicated appropriations as a large aquatic
6 ecosystem; and

7 (C) the other 9 large aquatic ecosystems receive
8 appropriations through the Geographic Programs
9 Program Area of the Environmental Protection
10 Agency.

11 **SEC. 3. COLUMBIA RIVER BASIN RESTORATION.**

12 Title I of the Federal Water Pollution Control Act
13 (33 U.S.C. 1251 et seq.) is amended by adding at the end
14 the following:

15 **“SEC. 123. COLUMBIA RIVER BASIN RESTORATION.**

16 **“(a) DEFINITIONS.—**

17 **“(1) ACTION PLAN.—**

18 **“(A) IN GENERAL.—**The term ‘Action
19 Plan’ means the Columbia River Basin Toxics
20 Reduction Plan developed by the Environmental
21 Protection Agency and the Columbia River
22 Toxics Reduction Working Group in 2010.

23 **“(B) INCLUSIONS.—**The term ‘Action
24 Plan’ includes any amendments to the plan.

1 “(2) COLUMBIA RIVER BASIN.—The term ‘Co-
2 lumbia River Basin’ means the entire United States
3 portion of the Columbia River watershed.

4 “(3) ESTUARY PARTNERSHIP.—The term ‘Es-
5 tuary Partnership’ means the Lower Columbia River
6 Estuary Partnership, an entity created by the States
7 of Oregon and Washington and the Environmental
8 Protection Agency under section 320.

9 “(4) ESTUARY PLAN.—

10 “(A) IN GENERAL.—The term ‘Estuary
11 Plan’ means the Estuary Partnership Com-
12 prehensive Conservation and Management Plan
13 adopted by the Environmental Protection Agen-
14 cy and the Governors of Oregon and Wash-
15 ington on October 20, 1999, under section 320.

16 “(B) INCLUSIONS.—The term ‘Estuary
17 Plan’ includes any amendments to the plan.

18 “(5) LOWER COLUMBIA RIVER ESTUARY.—The
19 term ‘Lower Columbia River Estuary’ means the
20 mainstem Columbia River from the Bonneville Dam
21 to the Pacific Ocean and tidally influenced portions
22 of tributaries to the Columbia River in that region.

23 “(6) MIDDLE AND UPPER COLUMBIA RIVER
24 BASIN.—The term ‘Middle and Upper Columbia
25 River Basin’ means the region consisting of the

1 United States portion of the Columbia River Basin
2 above Bonneville Dam.

3 “(7) PROGRAM.—The term ‘Program’ means
4 the Columbia River Basin Restoration Program es-
5 tablished under subsection (b)(1)(A).

6 “(8) WORKING GROUP.—The term ‘Working
7 Group’ means—

8 “(A) the Columbia River Basin Toxics Re-
9 duction Working Group established under sub-
10 section (c); and

11 “(B) with respect to the Lower Columbia
12 River Estuary, the Estuary Partnership.

13 “(b) COLUMBIA RIVER BASIN RESTORATION PRO-
14 GRAM.—

15 “(1) ESTABLISHMENT.—

16 “(A) IN GENERAL.—The Administrator
17 shall establish within the Environmental Protec-
18 tion Agency a Columbia River Basin Restora-
19 tion Program for the purposes of reducing toxic
20 contamination and cleaning up contaminated
21 sites throughout the Columbia River Basin.

22 “(B) NO EFFECT ON EXISTING AUTHOR-
23 ITY.—The Program shall not modify any legal
24 or regulatory authority or program in effect as
25 of the date of enactment of this section, includ-

1 ing the roles of Federal agencies in the Colum-
2 bia River Basin.

3 “(C) RELATIONSHIP TO EXISTING ACTIVI-
4 TIES.—The Program shall—

5 “(i) build on the work and collabo-
6 rative structure of the existing Columbia
7 River Toxics Reduction Working Group
8 representing the Federal Government,
9 State, tribal, and local governments, indus-
10 try, and nongovernmental organizations,
11 which was convened in 2005 to develop a
12 collaborative toxic contamination reduction
13 approach for the Columbia River Basin;

14 “(ii) in the Lower Columbia River
15 Basin and Estuary, build on the work and
16 collaborative structure of the Estuary
17 Partnership;

18 “(iii) coordinate with other efforts, in-
19 cluding activities of other Federal agencies
20 in the Columbia River Basin, to avoid du-
21 plicating activities or functions; and

22 “(iv) not impede implementation of
23 existing agreements or other recovery and
24 mitigation programs.

1 “(2) SCOPE OF PROGRAM.—The Program shall
2 consist of a collaborative stakeholder-based program
3 for reducing toxic contamination throughout the Co-
4 lumbia River Basin.

5 “(3) DUTIES.—The Administrator shall—

6 “(A) assess trends in water quality and
7 toxic contamination or toxics reduction, includ-
8 ing trends that affect uses of the water of the
9 Columbia River Basin;

10 “(B) collect, characterize, and assess data
11 on toxics and water quality to identify possible
12 causes of environmental problems;

13 “(C) provide the Working Group with
14 data, analysis, reports, or other information;

15 “(D) provide technical assistance to the
16 Working Group, and to State governments,
17 tribal governments, and local governments par-
18 ticipating in the Working Group, to assist those
19 agencies and entities in—

20 “(i) developing updates to the Action
21 Plan;

22 “(ii) recommending and prioritizing
23 projects and actions for the Action Plan;
24 and

1 “(iii) reviewing progress and effective-
2 ness of projects and actions implemented,
3 as well as cumulative progress toward the
4 goals of this section, and the Action Plan;

5 “(E) periodically update the Action Plan
6 and the Estuary Plan as required by counsel,
7 and ensure that those plans, when considered
8 together and in light of relevant plans developed
9 by other Federal or State agencies, form a co-
10 herent toxic contamination reduction strategy
11 for the Columbia River Basin;

12 “(F) track progress toward meeting the
13 identified goals and objectives of the Action
14 Plan by coordinating and reporting environ-
15 mental data related to the Action Plan and the
16 Estuary Plan and making the data and reports
17 on the data available to the public; and

18 “(G) provide grants in accordance with
19 subsection (d) for projects that—

20 “(i) assist in—

21 “(I) eliminating or reducing pol-
22 lution;

23 “(II) cleaning up contaminated
24 sites;

25 “(III) improving water quality;

1 “(IV) monitoring to evaluate
2 trends;

3 “(V) reducing runoff;

4 “(VI) protecting habitat; or

5 “(VII) promoting citizen engage-
6 ment or knowledge;

7 “(ii) address the goals, tasks, or ac-
8 tion items in the Action Plan or the Estu-
9 ary Plan; and

10 “(iii) are recommended by the Work-
11 ing Group to implement the Estuary Plan.

12 “(c) STAKEHOLDER WORKING GROUP.—

13 “(1) ESTABLISHMENT.—The Administrator
14 shall establish a Columbia River Basin Toxics Re-
15 duction Working Group.

16 “(2) MEMBERSHIP.—

17 “(A) IN GENERAL.—Membership in the
18 Working Group shall be on a voluntary basis
19 and any person invited by the Administrator
20 under this subsection may decline membership.

21 “(B) INVITED REPRESENTATIVES.—The
22 Administrator shall invite, at a minimum, rep-
23 resentatives of—

24 “(i) each State located in whole or in
25 part within the Columbia River Basin;

1 “(ii) the Governors of each State lo-
2 cated in whole or in part with the Colum-
3 bia River Basin;

4 “(iii) each federally recognized Indian
5 tribe in the Columbia River Basin;

6 “(iv) local governments located in the
7 Columbia River Basin;

8 “(v) industries operating in the Co-
9 lumbia River Basin that affect or could af-
10 fect water quality;

11 “(vi) electric, water, and wastewater
12 utilities operating in the Columba River
13 Basin;

14 “(vii) private landowners in the Co-
15 lumbia River Basin;

16 “(viii) soil and water conservation dis-
17 tricts in the Columbia River Basin;

18 “(ix) nongovernmental organizations
19 that have a presence in the Columbia River
20 Basin;

21 “(x) the general public in the Colum-
22 bia River Basin; and

23 “(xi) the Estuary Partnership.

24 “(3) GEOGRAPHIC REPRESENTATION.—The
25 Working Group shall include representatives from—

1 “(A) each State; and

2 “(B) each of the Lower, Middle, and
3 Upper Basins of the Columbia River.

4 “(4) DUTIES AND RESPONSIBILITIES.—The
5 Working Group shall—

6 “(A) participate in developing updates to
7 the Action Plan, including by providing com-
8 ments on the updates;

9 “(B) recommend and prioritize projects
10 and actions for the Action Plan; and

11 “(C) review the progress and effectiveness
12 of projects and actions implemented, as well as
13 cumulative progress toward the goals of this
14 section, and the Action Plan.

15 “(5) LOWER COLUMBIA RIVER ESTUARY.—

16 “(A) ESTUARY PARTNERSHIP.—

17 “(i) IN GENERAL.—The Estuary Part-
18 nership shall perform the duties and fulfill
19 the responsibilities of the Working Group
20 described in paragraph (4) as those duties
21 and responsibilities relate to the Lower Co-
22 lumbia River Estuary for such time as the
23 Estuary Partnership is the management
24 conference for the Lower Columbia River

1 National Estuary Program under section
2 320.

3 “(ii) DESIGNATION.—If the Estuary
4 Partnership ceases to be the management
5 conference for the Lower Columbia River
6 National Estuary Program under section
7 320, the Administrator may designate the
8 new management conference to assume the
9 duties and responsibilities of the Working
10 Group described in paragraph (4) as those
11 duties and responsibilities relate to the
12 Lower Columbia River Estuary.

13 “(B) ESTUARY PLAN.—

14 “(i) IN GENERAL.—The Estuary Plan
15 shall function as the Action Plan for the
16 Lower Columbia River Estuary for such
17 time as there is an Estuary Plan in place
18 pursuant to section 320.

19 “(ii) INCORPORATION.—If the Estu-
20 ary Partnership is removed from the Na-
21 tional Estuary Program, the duties and re-
22 sponsibilities for the lower 146 miles of the
23 Columbia River pursuant to this Act shall
24 be incorporated into the duties of the
25 Working Group.

1 “(d) GRANTS.—

2 “(1) IN GENERAL.—The Administrator shall es-
3 tablish a voluntary, competitive Columbia River
4 Basin toxics program to provide grants to State gov-
5 ernments, tribal governments, regional water pollu-
6 tion control agencies and entities, local government
7 entities, nongovernmental entities, or soil and water
8 conservation districts to develop or implement
9 projects authorized under this section for the pur-
10 pose of implementing the Action Plan and the Estu-
11 ary Plan.

12 “(2) FEDERAL SHARE.—

13 “(A) IN GENERAL.—Except as provided in
14 subparagraph (B), the Federal share of the cost
15 of any project or activity carried out using
16 funds from a grant provided to any person (in-
17 cluding a State, tribal, or local government or
18 interstate or regional agency) under this sub-
19 section for a fiscal year—

20 “(i) shall not exceed 75 percent of the
21 total cost of the project or activity; and

22 “(ii) shall be made on condition that
23 the non-Federal share of that total cost
24 shall be provided from non-Federal
25 sources.

1 “(B) EXCEPTIONS.—With respect to cost-
2 sharing for a grant provided under this sub-
3 section—

4 “(i) a tribal government may use Fed-
5 eral funds for the non-Federal share; and

6 “(ii) the Administrator may increase
7 the Federal share under such cir-
8 cumstances as the Administrator deter-
9 mines to be appropriate.

10 “(3) ALLOCATION.—In making grants using
11 funds appropriated to carry out this section, the Ad-
12 ministrator shall—

13 “(A) provide not less than 25 percent of
14 the funds to make grants for projects, pro-
15 grams, and studies in the Lower Columbia
16 River Estuary;

17 “(B) provide not less than 25 percent of
18 the funds to make grants for projects, pro-
19 grams, and studies in the Middle and Upper
20 Columbia River Basin, which includes the
21 Snake River Basin; and

22 “(C) retain for Environmental Protection
23 Agency not more than 5 percent of the funds
24 for purposes of implementing this section.

25 “(4) REPORTING.—

1 “(A) IN GENERAL.—Each grant recipient
2 under this subsection shall submit to the Ad-
3 ministrator reports on progress being made in
4 achieving the purposes of this section.

5 “(B) REQUIREMENTS.—The Administrator
6 shall establish requirements and timelines for
7 recipients of grants under this section to report
8 on progress made in achieving the purposes of
9 this section and the goals of the Action Plan
10 and the Estuary Plan.

11 “(5) RELATIONSHIP TO OTHER FUNDING.—

12 “(A) IN GENERAL.—Nothing in this sec-
13 tion limits the eligibility of the Estuary Part-
14 nership to receive funding under section 320(g).

15 “(B) LIMITATION.—None of the funds
16 made available under this subsection may be
17 used for the administration of a management
18 conference under section 320.

19 “(e) ANNUAL BUDGET PLAN.—The President, as
20 part of the annual budget submission of the President to
21 Congress under section 1105(a) of title 31, United States
22 Code, shall submit information regarding each Federal
23 agency involved in protection and restoration of the Co-
24 lumbia River Basin, including an interagency crosscut
25 budget that displays for each Federal agency—

1 “(1) the amounts obligated for the preceding
2 fiscal year for protection and restoration projects,
3 programs, and studies relating to the Columbia
4 River Basin;

5 “(2) the estimated budget for the current fiscal
6 year for protection and restoration projects, pro-
7 grams, and studies relating to the Columbia River
8 Basin; and

9 “(3) the proposed budget for protection and
10 restoration projects, programs, and studies relating
11 to the Columbia River Basin.

12 “(f) AUTHORIZATION OF APPROPRIATIONS.—There
13 is authorized to be appropriated to the Administrator to
14 carry out this section \$50,000,000 for each of fiscal years
15 2015 through 2020, to remain available until expended.”.

○



COLUMBIA RIVER INTER-TRIBAL FISH COMMISSION

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August 13, 2014

The Honorable Jeff Merkley
United States Senate
313 Hart Senate Office Building
Washington, DC 20510

Dear Senator Merkley:

The Columbia River Inter-Tribal Fish Commission (CRITFC) thanks you for your efforts to reduce pollution and improve water quality in the Columbia River watershed by introducing the Columbia River Restoration Act of 2014. CRITFC's member tribes are strongly supportive of this vital legislation that promises to provide policy direction and resources for improving the quality of the fishery resource that is central to our culture and way of life.

In September 2013, the Oregon Health Authority and the Washington Department of Health issued a fish consumption advisory for the mid-Columbia River because of toxic contamination. This was devastating news for all of the tribes that have lived and relied upon the resources provided by this watershed for millennium.

In addition, thank you for recognizing in the Bill's findings that CRITFC's fish consumption survey showed that tribal members are eating 6 to 11 times more fish than the national average. States and tribes in the Pacific Northwest have established, or are in the process of establishing, human health criteria based water quality standards that more accurately consider tribal fish consumption. Oregon now has surface water quality standards based on a fish consumption rate of 175 grams per day. The states of Washington and Idaho are both in the process of developing more stringent water quality standards that will account for tribal fish consumption patterns. In December 2013, the EPA approved the Spokane Tribe's fish consumption rate of 865 grams per day for setting on reservation water quality standards. Compliance with these EPA-approved standards should be aided by S. 2674 to adequately address the problem of toxic pollution.

If you have any further questions, please contact Charles Hudson, Intergovernmental Affairs Director, or myself at 503-238-0667.

Sincerely,

Carlos Smith
CRITFC Chairman

Common Cause: Building Flexibility into the Columbia River Treaty

PROGRAM ON WATER ISSUES, MUNK SCHOOL OF GLOBAL AFFAIRS,
UNIVERSITY OF TORONTO

We live in a time of constant and rapid change – change that affects our economy, our society, and our environment. So it is perhaps not surprising that as governments and communities consider the future of the Columbia River Treaty, a central question becomes **“How can we build in the capacity to adapt to future change in the Basin?”** This bulletin addresses this important question.

FOR FIFTY YEARS, Canada and the United States have collaborated on and shared in the benefits of the Columbia River Treaty (CRT), a bi-national agreement that has been hailed as one of the most successful transboundary water treaties in the world. Since coming into effect in 1964, the CRT has protected communities from flooding and has generated hydropower for the Pacific Northwest. With the opportunity for either Canada or the U.S. to give notification to terminate the power provisions of the Treaty now in effect, governments and communities are asking, **“Should we continue with the Treaty or should we consider changes? If we change it, how should we do it? Are there issues that can be addressed outside the Treaty?”**

There have been many significant and unpredicted changes since 1964 in the Basin including changes in energy markets, population growth and settlement patterns, environmental issues, public expectations of participation, the status of Tribes and First Nations, and climate impacts. These changes have led many to suggest that the Columbia River Treaty should be broadened to embrace values that go beyond its original areas of focus

(flood prevention and hydro power generation) to include values such as ecosystem function, fisheries, irrigation, water supply and navigation.

Because of the possibility that either party may terminate the power provisions of the Treaty, Canada (through the Province of British Columbia) and the U.S. (through the Entity that implements the Treaty) have carried out extensive reviews and have developed positions on what the future Treaty should contain and address. While there are differences between the two positions, **both agree that flexibility is needed and there is a need to strike a balance between certainty and adaptability. Both agree that there are gains to be made through coordinated management of the river, and that such gains and benefits should be shared. Both recognize the need to involve Tribes / First Nations, communities and other regional interests during any negotiation process.**

But while there is a general agreement among stakeholders that there needs to be improved flexibility to address unexpected changes in values or conditions and perhaps to add values

beyond flooding and hydropower, there is no consensus on how we might achieve this and indeed whether we should do this within the Treaty or outside it.

To address the question, the Program on Water Issues at the Munk School of Global Affairs at the University of Toronto worked with two experts in international law – Nigel Banks from the University of Calgary and Barbara Cosens from the University of Idaho – to develop *Protocols for Adaptive Water Governance: The Columbia River Treaty*. This paper explores how flexibility can be achieved through the Treaty and through other transboundary mechanisms. Through the lens of adaptive water governance, Banks and Cosens examined existing models from both the international and domestic level to identify legal mechanisms that allow for flexibility and adaptive capacity in transboundary water agreements.

This bulletin provides a summary of their findings, highlighting five of the models studied. It is intended to be read in conjunction with the Protocols paper, and the reader is encouraged to go to the paper to gain a fuller understanding. The paper can be accessed at <http://powi.ca/>

1964 Columbia River Treaty

The Columbia River Treaty between Canada and the U.S. focuses on flood protection and hydropower generation. It is implemented through designated Entities in both countries that implement the Treaty goals and optimize actual operations.

Substantial **flexibility** in implementation of the Treaty has been achieved through supplementary agreements, Non-Treaty Storage Arrangements, ongoing Entity cooperation and the fact that the Entities have authority to optimize arrangements as long as both parties benefit.

The **limits to flexibility** are due in part to the lack of a public process, the fact that the Permanent Engineering Board is a technical body with no standing political governance institution, and the absence of a provision for regular review.

1944 Colorado River Treaty

The 1944 Treaty between the U.S. and Mexico is focused on water allocation. It provides for a coordinating entity – the International Boundary and Water Commission (IBWC) – that has both technical and diplomatic functions.

A high degree of **flexibility** has been provided through the Minute process (the records of decisions that are made by the IBWC and subsequently accepted by both federal governments) which has allowed the IBWC to add new values and address new challenges.

Shortcomings include the fact that the IBWC is a technical body with unclear authority for governance. Also, there is a lack of accountability because oversight of the IBWC is unclear, there is uneven public involvement and the upstream partner (the U.S.) dominates the scope and outcome of the Minute process.

How is flexibility achieved in other transboundary arrangements?



Boundary Waters Treaty of 1909 and IJC

The Boundary Waters Treaty between Canada and the U.S. addresses boundary and transboundary waters.

The **flexibility mechanisms** under the Treaty include the institution of the International Joint Commission (IJC) – a bi-national standing body that operates through a series of technical study boards. The reference jurisdiction of the IJC allows the governments to add to the contents of the original Boundary Waters Treaty by asking the IJC to address new issues and assist them in reaching agreement on those issues. Also, when the IJC issues an Order of Approval for a boundary or transboundary water project, it continues to supervise the Order and has the ability to review it to ensure that it responds to changing needs and interests.

The Boundary Waters Treaty has survived for over a hundred years without substantial amendment, although Canada and the U.S. have supplemented it by negotiating separate agreements such as the Columbia River Treaty and the Great Lakes Water Quality Agreement.

Great Lakes Water Levels

Water levels on the Great Lakes are regulated by the IJC under the Boundary Waters Treaty of 1909.

The **flexibility** mechanisms in water level regulation include general treaty language that allows the inclusion of additional interests and values, the benefit of an institution (the IJC) which is a standing body with multiple sources of authority, the existence of an informed public, and the fact that geographic scale can be expanded.

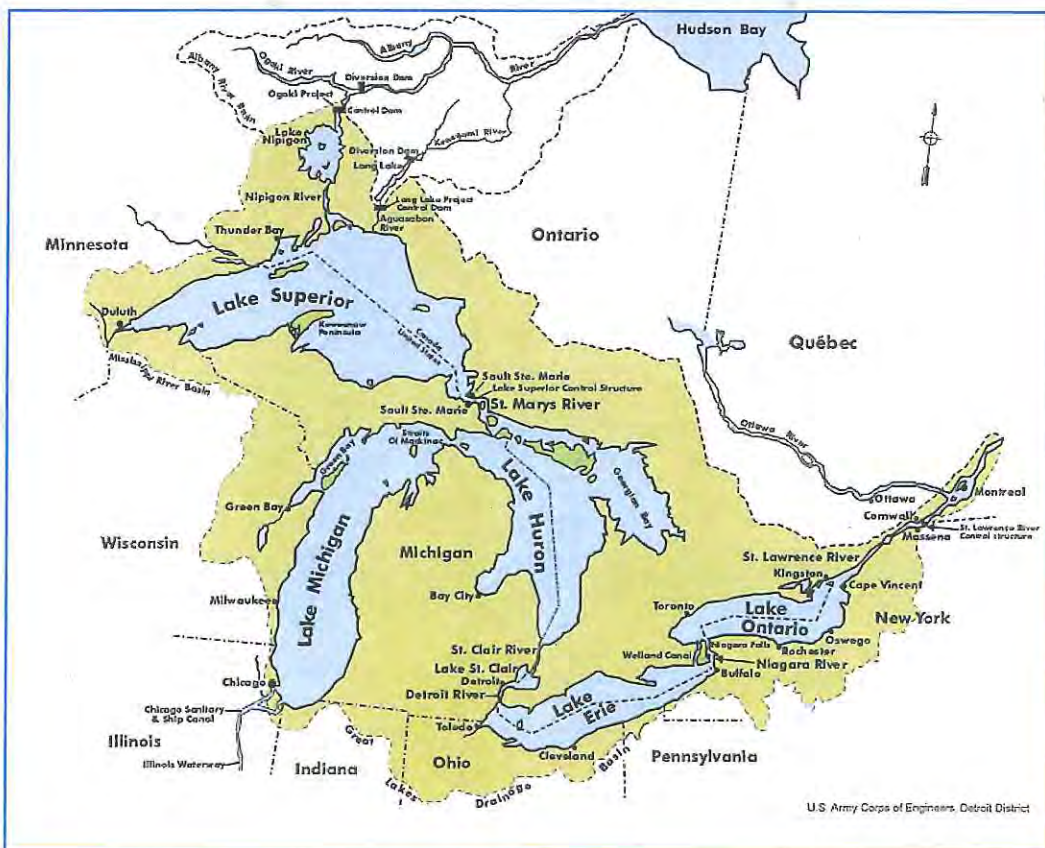
The **limits to flexibility** include the reality that reviewing Levels Orders can take a decade or more due to the need to carry out studies and consult with stakeholders. Also, it is easier to add values than to change the priority of existing values, and experience shows that it is not possible to please everyone because there are always trade-offs to be made when regulating water levels. This experience raises the need for modest expectations and an incremental approach.

Great Lakes Compact and Agreement

Not every issue on which transboundary cooperation is sought requires a treaty. The Great Lakes Compact is a subnational agreement among 8 states and 2 provinces in the Great Lakes Basin. It is focused on preventing new out-of-basin diversions and new large consumptive uses.

Flexibility may come from the internationally non-binding nature of the Compact and Agreement which can allow experimentation. Such an approach affords local control over issues that must be tailored locally or that require local action.

The internationally non-binding nature of the Agreement is also a limitation in that it requires some way to ensure that all parties play their role in implementation.



Summary and Conclusions

The formal review processes of the Columbia River Treaty carried out by the Province of British Columbia and the U.S. Entity reveal common ground on:

- the need for flexibility in future arrangements and implementation, particularly in the face of climate change, evolving energy markets and population growth, and
- the desire to involve Tribes and First Nations as well as various interests in any future negotiation and implementation of an agreement.

At the same time there are significant differences between the two reviews relating to the treatment of ecosystem values and perhaps other values, the approach to sharing the benefits, and the assessment of what the Treaty requires for flood control after 2024.

The review of mechanisms to enhance flexibility and adaptive capacity in existing transboundary water agreements clearly demonstrates that **there are a number of ways in which flexibility can be built into the Columbia River Treaty or achieved outside the Treaty. In addition, some of the models identified could serve to bridge differences between the parties on key issues such as the treatment of ecosystem values.**

There is always a tension in international agreements between certainty and flexibility. Resolving this requires governments to consider five elements:

- **Institutions:** Separating the governance function from technical implementation.
- **Scale:** Considering the appropriate level of agreements and their implementation to address particular issues. Not every issue on which transboundary cooperation is sought requires a treaty.
- **Process:** Providing for periodic review and public participation.
- **Legitimacy:** Assuring accountability, transparency, and participation of stakeholders.
- **Constrained flexibility:** Encouraging "win-win" solutions within the clearly defined boundaries of the agreement.

Protocols for Adaptive Water Governance: The Columbia River Treaty by Nigel Banks and Barbara Cosens is available at <http://powi.ca/>



Nigel Banks

Barbara Cosens

Links

The U.S. Regional Recommendation is available at <http://www.crt2014-2024review.gov/Files/Regional%20Recommendation%20Final,%202013%20DEC%202013.pdf>

The B.C. Decision on the Columbia River Treaty is available at http://blog.gov.bc.ca/columbiarivertreaty/files/2012/03/BC_Decision_on_Columbia_River_Treaty.pdf

Columbia Basin Tribes Coalition

on the
Columbia River Treaty 2014/2024 Review

October 15, 2014

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- Burns Paiute Tribe
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Integrating Ecosystem-based Function into Columbia River Treaty Operations

As implemented in 1964, the Columbia River Treaty (Treaty) addresses two primary purposes – hydropower and flood risk management. The Columbia Basin tribes (tribes) have proposed integrating ecosystem-based function operations into Columbia River flood risk and hydropower management under a modernized Treaty. This proposal was adopted by regional sovereigns and stakeholders in the U.S. as integral to modernizing the Treaty and is a principle element of the *U.S. Entity Regional Recommendation on the Future of the Columbia River Treaty after 2024*. To implement this paradigm shift, the tribes also propose changes to Treaty governance, adaptations for climate change and structural upgrades for projects to better protect and enhance the tribes' trust and treaty rights and resources, rights and resources that were neglected when the Treaty was developed.

Since time immemorial, the rivers of the Columbia Basin have been, and continue to be, the life blood of the tribes. Columbia Basin tribes depend on the ecosystem of the Columbia Basin watershed for its ability to provide, protect and nurture cultural resources, traditions, values and landscapes throughout its length and breadth. Clean and abundant water that is sufficient to sustain healthy populations of fish, wildlife, and plants is vital to holistic ecosystem-based function and life itself. A restored, resilient and healthy watershed will include ecosystem-based function as defined by the Columbia Basin tribes in Attachment 1.

While much has been done to address the adverse effects of hydropower development and operations on Columbia Basin ecosystem-based function, achieving ecosystem-based function is not limited to managing the Columbia Basin to address fish and wildlife listed under the Endangered Species Act or the Northwest Power and Conservation Act. The tribes have explored a range of ecosystem-based function operations for integration into a modernized Treaty as represented by two modeled scenarios, 3Ea and 3Eb in the following figures. While additional collaborative work needs to be pursued to determine operations that are implemented under a modernized Treaty, these operations would support a broad suite of fish, wildlife and other natural resources. With Treaty modernization, ecosystem integration at these levels or greater could be aggressively achieved and provide adaptation for climate change with minimal disruption to current existing uses

such as water supply, hydropower operations, and flood risk management. The tribes believe that a regional flood risk management study is essential to properly and fully balance flood risks with other flow management priorities and costs. The tribes are optimistic that the study could lead to outcomes that would maintain adequate levels of flood risk with minimal economic consequences from infrequent high flows. Integration of ecosystem-based function requires the implementation of operational rule curves that address ecosystem needs in balance with hydropower and flood risk management at key Columbia Basin projects, similar to what has been accomplished at Libby and Hungry Horse dams.

The following are necessary elements to achieve ecosystem-based function in the Columbia Basin:

Treaty Governance:

- Expand the Treaty Entities to include expert knowledge and representation for ecosystem-based function in both the U.S. and Canada.
- Members of the sovereign tribal governments must participate as ecosystem representatives in the U.S. Entity.

Structural modifications:

- Fish passage facilities must be immediately investigated and, if warranted, installed at Chief Joseph and Grand Coulee dams in the U.S., and at Keenleyside, Brilliant, Waneta and Seven Mile dams in Canada to allow reintroduction of salmon, steelhead and other fishes to historical habitats.
- Infrastructure, including the spill gates at Grand Coulee Dam, must be modified as needed to increase operational flexibility and preserve storage, particularly in drier water years.
- Investigate raising the elevation of the Banks Lake diversions to leave cooler water in the river, diverting warmer water for irrigation.
- Investigate potential for reducing the generation of total dissolved gas (TDG) at Grand Coulee Dam.
- Investigate and if feasible, implement selective temperature regulation from high head dams so long as this action will not increase reservoir water temperatures.

Ecosystem-based Function Operations:

- Keep reservoirs fuller and more stable with cooler waters, particularly in drier water years (Fig 1).
- Restore spring and early summer freshet flows, particularly in drier water years (Fig. 2).
- Increase springtime fish spills at run-of-river dams in the U.S.
- Reduce drafts at Grand Coulee, Libby, Brownlee, and Dworshak dams in the U.S. and at Mica and Keenleyside dams in Canada in drier water years.
- Continue VarQ operations at Hungry Horse and Libby dams.
- Implement rule curves at system dams that integrate ecosystem-based function, hydropower and flood risk management for climate change adaptation.

- For a more comprehensive explanation of ecosystem-based function operations, please contact the individuals listed at the end of this paper for the tribes' detailed discussion paper.

Key Facts:

- Tribes, without consultation or prior and informed consent, have contributed substantially to the initial development and continued operation of the Columbia Basin hydropower system including flood risk management for downriver investments in cities, ports and other infrastructure through substantial sacrifices to their cultural, health, social, religious and ecosystem resources.
- Tribes are requesting that the U.S. Department of State include them in negotiations and future governance with Canada for a modernized and resilient Treaty that integrates ecosystem-based function as an equal purpose along with flood risk and hydropower management.
- The region needs to conduct a U.S. flood risk management study to seek alternative means (i.e. levees and floodplain management) to reduce the consequences of high flows thereby increasing needed flexibility in reservoir operations.

About this paper: The Columbia basin tribes prepared this paper after cessation of the Columbia River Treaty Review Sovereign Participation Process and the U.S. Entity's submission of the Regional Recommendation to the Department of state in December 2013. The contents of this paper are consistent with the consensus regional recommendation. In addition to governance and infrastructure aspects, it addresses operations that might be implemented under the Treaty to integrate three primary purposes (ecosystem-based function, flood risk management and hydropower production). This paper does not represent a position on specific Treaty operations, but rather the intent is to provide a range of scenarios for further analysis and consideration in a collaborative forum used to determine future Treaty operations. And while fish passage and reintroduction are an integral aspect of ecosystem-based function, a substantive discussion of that issue is provided in a separate paper. This paper was approved for distribution by tribal leaders on October 1, 2014 and may be amended following additional analysis and review.

Contact:

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Figure 1 Grand Coulee Elevations: Comparison of Current Condition (red), Ecosystem Scenario 3Eb (green), and Ecosystem Scenario 3Ea (yellow); Average for 70 water years; Example of more stable reservoirs.

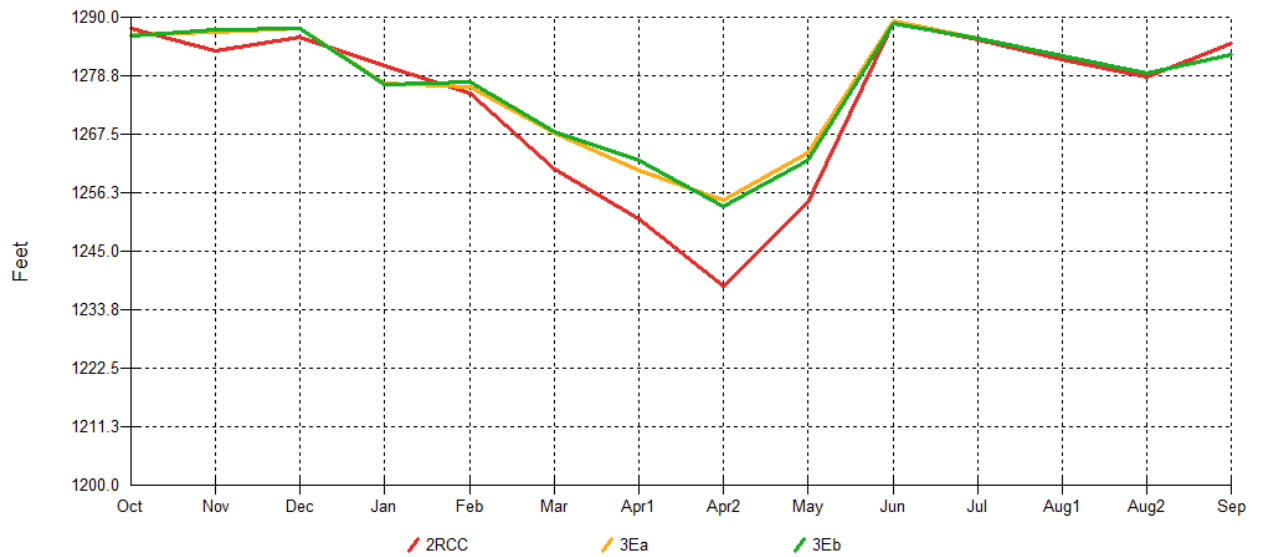
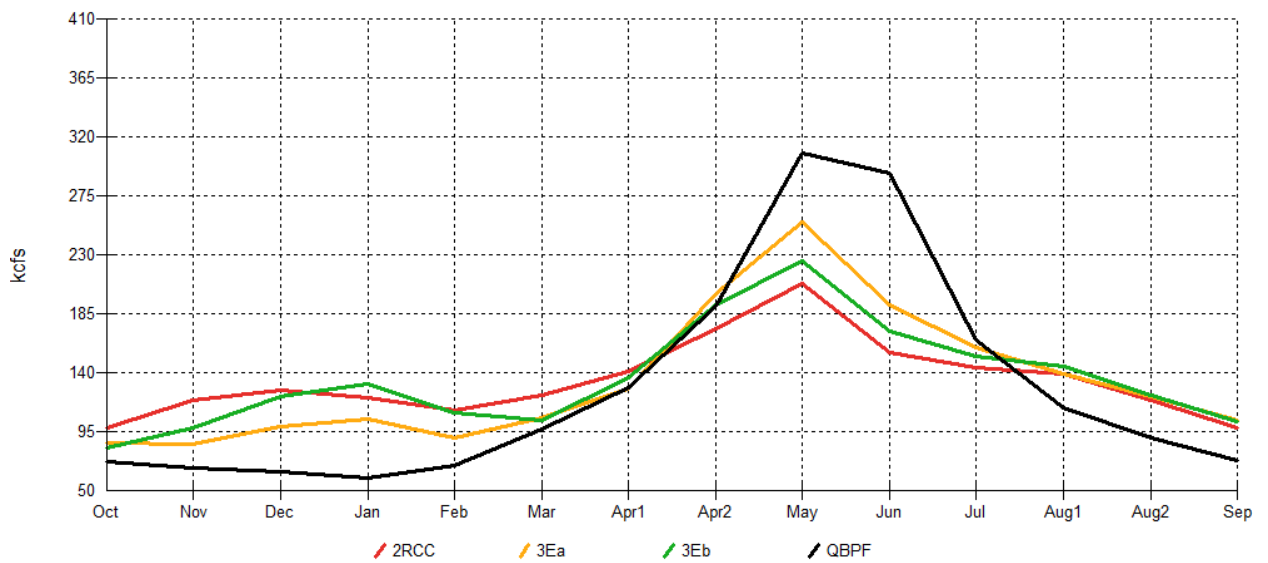


Figure 2 Lower Columbia River Flows: Comparison of Current Condition 2RCC (red), Ecosystem Scenario 3Eb (green), and Ecosystem Scenario 3Ea (yellow) to the Natural, Unregulated Hydrograph QBPF (black); Columbia River at The Dalles; Driest 20% of Water Years.



Definition of Ecosystem-based Function

Adopted by the Coalition of Columbia Basin Tribes June 2013

Since time immemorial, the rivers of the Columbia Basin have been, and continue to be, the life blood of the Columbia Basin tribes. Columbia Basin tribes view ecosystem-based function of the Columbia Basin watershed as its ability to provide, protect and nurture cultural resources, traditions, values and landscapes throughout its length and breadth. Clean and abundant water that is sufficient to sustain healthy populations of fish, wildlife, and plants is vital to holistic ecosystem-based function and life itself. A restored, resilient and healthy watershed will include ecosystem-based function such as:

- Increased spring and summer flows resulting in a more natural hydrograph;
- Higher and more stable headwater reservoir levels;
- Restoring and maintaining fish passage to historical habitats;
- Higher river flows during dry years;
- Lower late summer water temperature;
- Reconnected floodplains throughout the river including a reconnected lower river estuary ecosystem as well as reduced salt water intrusion during summer and fall;
- Columbia River plume and near shore ocean enhanced through higher spring and summer flows and lessened duration of hypoxia; and,
- An adaptive and flexible suite of river operations responsive to a great variety of changing environmental conditions, such as climate change.

Improved ecosystem-based function in the Columbia Basin Watershed is expected to result in at least:

- Increased recognition, protection and preservation of tribal first foods and cultural/sacred sites and activities, First foods include water, salmon, other fish, wildlife, berries, roots, and other native medicinal plants;
- An estuary with an enhanced food web and increased juvenile fish survival;
- Increases in juvenile and adult salmon survival;
- Decreased mainstem travel time for migrating juvenile salmon;
- Increased resident fish productivity that provides stable, resilient populations;
- Increased wildlife productivity that provides stable, resilient populations; and,
- Salmon and other juvenile and adult fish passage to historical habitats in the Upper Columbia and Snake River basins, and into other currently blocked parts of the Columbia River Basin.

Columbia Basin Tribes Coalition

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Flood Risk Management

Background: The U.S. and Canada signed the Columbia River Treaty in 1961 and began implementing the Treaty in 1964. The Treaty's current purposes are narrowly defined to optimize hydropower generation and coordinate flood risk management in the Columbia River Basin. The U.S. Entity (Bonneville Power Administration and the U.S. Army Corps of Engineers) is responsible for implementing the Columbia River Treaty with Canada. After several years of coordination and collaboration by the regional sovereigns, and with input by stakeholders, the *U.S. Entity Regional Recommendation for the Future of the Columbia River Treaty after 2024* was submitted to the U.S. Department of State in December 2013 for its review and consideration. The need for a flood risk management review was identified during the Sovereign Participation Process as a domestic matter to be undertaken in 2014, wholly separate from the Regional Recommendation.

Issue: Under the Columbia River Treaty (Treaty) with Canada, one of two principle benefits to the United States is assured flood storage and coordinated flood risk management. After 2024, unless the Treaty is modernized, the U.S. loses these benefits but retains the right to "call upon" Canada to provide flood storage once the U.S. has "effectively used" its reservoir capacity for flood risk management. This change in flood risk management after 2024 coupled with future climate change projections raises questions regarding the capacity and capability of flood prevention infrastructure (reservoirs, levees and other similar structures) and planning (e.g. reservoir storage diagrams, levee construction and maintenance and flood plain management) in the Columbia Basin, both for local flood risk management in the upper Basin and for system flood risk management throughout the Basin, but especially for areas of high economic value in the lower Basin.

The U.S. and Canadian Entities implementing the Treaty have different perspectives on how the called upon operation for coordinated flood risk management should be implemented after 2024. The U.S. Entity believes it can call upon Canada to prevent river flows from exceeding 450,000 cubic feet per second (cfs) as

measured at The Dalles Dam and that only eight system storage reservoirs in the U.S. need to be effectively used before this call can be made. The Canadian Entity believes that it must respond to a call from the U.S. only to prevent flows at The Dalles from exceeding 600,000 cfs and only after the U.S. has effectively used all available storage in the Basin, not just the eight system storage reservoirs. The U.S. Army Corps of Engineers has determined that damages begin to occur at flow levels above 450,000 cfs as measured at The Dalles and that substantial damage occurs when flows exceed 600,000 cfs.

Neither perspective addresses the management of an 1894-type flood event, where the unregulated flow was estimated to exceed 1,200,000 cfs as measured at the current location of The Dalles Dam. The U.S. Army Corps of Engineers has indicated that in light of current reservoir capacity, which is substantially less than what Congress called for in authorizing legislation in the 1950s and 1960s, it would strive to manage such an event so as not to exceed 750,000 cfs at The Dalles Dam.

Tribal Concerns: The Columbia Basin tribes are also concerned that the default change to “called upon” and “effective use” after 2024 will adversely affect their efforts to enhance ecosystem-based function through a modernized Treaty because it may:

- require larger and more frequent drawdowns at Grand Coulee Dam (Lake Roosevelt) and other U.S. reservoirs in order to provide minimal flood risk prevention;
- adversely impact resident fish, cultural resources, navigation, recreation, riverbank stability and public safety through dramatic changes in reservoir elevation; and,
- limit system capability to provide necessary spring and summer flows for salmon.

Near-Term Recommendation: Because of the serious questions about the Basin’s capability of addressing major flood events and the limitations on ecosystem-based function from post-2024 called upon operations, **the tribes support the pursuit, if necessary to initiate this review, of congressional authorization and appropriations for a region-wide public process to assess potential changes to the current level of flood risk protection in the Columbia Basin. Such a process should be initiated in 2014, or as soon as possible thereafter, but must be completed before 2024. Congress should authorize a comprehensive approach open broadly to input from the public and stakeholders which addresses all options to manage both medium and high flow events.** The process needs to identify flood risk management vulnerabilities to climate change and potential adaptive management actions to address these vulnerabilities. The process should include a review of infrastructure capacities and capabilities, floodplain management, Columbia Basin reservoir operations, and levees - both strategic improvements to existing levees and the potential need for additional levees. The process should also evaluate and address potential impacts to other river uses and infrastructure

such as navigation, bridges, and other transportation features, hydropower, irrigation, recreation, fish and wildlife, and cultural resources.

Contact:

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Restore Fish Passage

Background: The U.S. and Canada signed the Columbia River Treaty in 1961 and began implementing the Treaty in 1964. The Treaty's current purposes are narrowly defined to optimize hydropower generation and coordinate flood risk management in the Columbia River Basin. The U.S. Entity (Bonneville Power Administration and the U.S. Army Corps of Engineers) is responsible for implementing the Columbia River Treaty with Canada. The dams built by Canada under the Treaty did not include facilities for fish passage, nor did Grand Coulee and Chief Joseph dam when they were constructed by the U.S. After several years of coordination and collaboration by the regional sovereigns, and with input by stakeholders, the *U.S. Entity Regional Recommendation for the Future of the Columbia River Treaty after 2024* was submitted to the U.S. Department of State in December 2013 for its review and consideration. Through the Regional Recommendation, the regional sovereigns and the U.S. Entity agreed that "the United States should pursue a joint program with Canada, with shared costs, to investigate and, if warranted, implement restored fish passage and reintroduction of anadromous fish on the main stem Columbia River to Canadian spawning grounds."

Issue: The loss of salmon into the upper Columbia Basin was a monumental, inadequately mitigated, and bilateral infringement on the cultures of native salmon peoples and a loss of economic opportunity for all residents of the Pacific Northwest, including the commercial fishing industry. Beneficiaries of the coordinated, bilateral development of the Columbia River Basin have not adequately mitigated for this loss, in no small part because they underestimated the scope and challenge of doing so. The modernization of the Columbia River Treaty presents an opportunity to address this injustice.

Solution: The Pacific Northwest region has proposed that Ecosystem-Based Function be included as a third purpose in a modernized Treaty. The tribes have proposed that restoring fish passage and reintroducing salmon and other species into areas where they are currently blocked is a critical component of future ecosystem management within the Treaty. The tribes have formulated a pragmatic, bilateral, multi-phased approach to salmon passage and reintroduction in the upper Columbia: 1) Planning; 2) Testing; 3) Construction; and, 4) Evaluation and Adaptation.

Progress through these phases would occur only after successful conclusions or outcomes from previous phases. Efficiencies in implementing these phases should be achievable if undertaken in a comprehensive and bilateral approach. Testing of fish passage could be accomplished in a sequential manner with interim passage facilities shared between U.S. and Canadian projects. In addition to restoring the cultural and subsistence values of salmon to indigenous peoples, restoring salmon and steelhead access to the upper Columbia Basin may be critical to bolster their viability in the face of expected and imminent climate change by providing salmon access to the cooler waters above Grand Coulee Dam and into Canada.

To inform the U.S. and Canadian Entity, as well as other regional sovereigns and stakeholders, the Columbia Basin tribes and First Nations developed an interim joint paper “Fish Passage & Reintroduction into the US & Canadian Upper Columbia River.” (See more at: <http://www.critfc.org/tribal-treaty-fishing-rights/policy-support/critfc-policy-workshops/future/#sthash.0kEi1Ahe.dpuf>). With support from regional sovereigns and stakeholders, the Columbia Basin tribes and First Nations co-hosted a technical workshop on restoring fish passage in March 2013 and the Future of Our Salmon Conference on Restoring Historical Fish Passage in April 2013. Based upon the information shared during the technical workshop and conference, it is clear that fish passage can be restored above Chief Joseph and Grand Coulee dams and into the spawning grounds in Canada. (See more at: <http://www.critfc.org/tribal-treaty-fishing-rights/policy-support/critfc-policy-workshops/future/>). Based upon the information shared and learned during the technical workshop and conference, the Columbia Basin Tribes and First Nations will be releasing an updated joint report on restoring historical fish passage in the Fall 2014.

Background: The upper Columbia River Basin in the U.S. and Canada once produced annual runs of 1 to 3 million salmon and steelhead and provided habitat for lamprey, sturgeon and other fish species. These aquatic resources were critical to the cultures, spirituality, subsistence, and economies of the Columbia Basin tribes and First Nations. Fish access to the upper Basin was lost with the construction of Grand Coulee Dam and further diminished with the construction of Chief Joseph Dam in the U.S. and Hugh Keenleyside (Arrow), Brilliant, Waneta, Seven Mile and other dams in Canada. The potential for restoring fish passage back into the upper basin was further complicated with the ratification of the Columbia River Treaty, which led to construction of additional dams throughout the basin and management of river flows counter to the health and viability of upper basin salmon.

The cumulative decisions in the U.S. and Canada to block fish access and inundate habitats were made over the objections or without consultation and consideration of the Columbia Basin tribes’ and First Nations’ rights. Since Treaty ratification, awareness and interpretation of these aboriginal rights has been considerably clarified and confirmed by the courts.

In recent years, science and technologies have been developed that can effectively pass adult and juvenile salmon and other fishes over existing dams, though the larger Treaty

dams and reservoirs will present greater challenges. These new facilities are being installed at other dams throughout the Pacific Northwest, including Round Butte and Cougar dams in Oregon and Upper Baker, Lower Baker, and Lewis River dams in Washington.

Summary:

- Specifically include fish passage restoration and reintroduction into the upper Columbia River Basin as an element and action item within a modernized Columbia River Treaty.
- Modernized Treaty operations should not interfere with other opportunities to restore fish passage and reintroduction of anadromous fish in other blocked areas of the Columbia River.
- Undertake a comprehensive, bilateral approach to salmon reintroduction that targets Chief Joseph and Grand Coulee dams in the U.S. and Arrow, Brilliant, Waneta, Seven Mile dams in Canada.
- Columbia Basin tribes and First Nations should have a leadership role in this fish passage effort.
- With bilateral agreement, the planning and testing phases of this proposal could and should be initiated promptly once there is agreement to pursue modernization of the Treaty.
- A modernized Columbia River Treaty should include both a commitment to study and then implement fish passage based on positive study results.
- L. Vaughn Downs, an engineer who worked on the design and construction of Grand Coulee Dam, stated about fish passage in the 1930s: “It was just money. If you build the dam, you could sure as hell build a fish ladder.”
- Now is the time to make fish passage into the Upper Columbia a reality.

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